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MEDICAL & SURGICAL

JOURNAL.

A Monthly Record of Medical and Surgical Science.

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CANADA

MEDICAL & SURGICAL JOURNAL

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Original Communications.

EXTRA-UTERINE FŒTATION TREATED BY ELECTRICITY.*

REPORT OF A SUCCESSFUL CASE, WITH REMARKS.

By WILLIAM GARDNER, M.D.,
Professor of Gynæcology, McGill University; Gynæcologist to the Montreal General Hospital.

Mrs. ——, æt. 38, married 19 years, four pregnancies all to full term, natural labors, slow recoveries. Ever since the birth of her second child, 16 years ago, has suffered from symptoms of uterine disease. The last child was born 9½ years ago. Since then the uterine symptoms have been worse, consisting of pelvic and lumbar pain, bearing down sensations, profuse and protracted menstrual periods and leucorrhœa. The last appearance of menses previous to the symptoms about to be detailed occurred about October 1st, 1884. On the 16th of October a single complete act of coitus occurred, there having been complete abstinence for many months previous and subsequently during the interval before patient's illness. After the 16th of October she did not again menstruate, but had slight discharges of bright red blood, lasting one to two days and occurring at irregular intervals. She suffered from indigestion, nausea with occasional vomiting, and suspected that she was pregnant. On the 20th of December following, my friend, Dr. Gurd, had an urgent message to see her, and on arriving found that she had been suddenly seized with violent pelvic

* Read before the Medico-Chirurgical Society of Montreal.

and abdominal pain, vomiting and faintness, amounting almost to collapse ; the pulse was weak and the surface deadly pale. Pain was principally referred to the right iliac region, and here also marked tenderness and induration were noticed. Next day, the patient seeming to be worse, I was asked to see her in consultation. On vaginal examination the uterus was found to be prolapsed and retroverted, the vaginal portion so low that it lay immediately within the vaginal orifice. To the right of the uterus, and adherent to it, lay a firm mass. Rectal examination merely confirmed the results of vaginal examination. Hæmatocele was considered to be the probable nature of the case. Morphia was freely given to control pain. The symptoms speedily subsided, but never completely disappeared, although she was able to sit up. Two or three weeks later another similar but milder attack occurred. A third and more severe occurred towards the end of January. During this latter, I again saw the lady several times with Dr. Gurd. Five weeks had elapsed between my first and second visits. Meanwhile the doctor, as a result of frequent visits and observations of the progress of the case, of the development of areola and follicles around the nipple and pigmentation of the linea alba and lower part of the abdomen, and because of steady increase in size of the mass in the right iliac region, began to suspect extra-uterine fœtation. In this opinion I could not but concur. There were, however, some doubtful points. The tumor, it is true, had increased in size, but it felt solid ; no distinct evidence of fluctuation could be had, no ballotement certainly. On the other hand, the softening and swelling of the cervix had become exceedingly well-marked. The prolapsed vaginal portion lay in the vaginal orifice, the elongated anterior lip projecting through it. Early in February *bruit de souffle* became distinctly audible over the tumor, which now extended upwards to a line drawn transversely on a level with the anterior superior spine of the ilium, and laterally to a line $\frac{3}{4}$in. to the left of the middle line, completely filling the space between these lines and the margin of the pubes below and the crest of the ilium on the right. The most careful and repeated auscultation revealed

no fœtal heart sounds. Vaginal examination showed the pelvis to be almost filled by the enlarging mass, together with the swollen, softened and retroverted uterus. I now ventured to pass the sound, which entered four inches, the concavity being backwards, and seemed to indicate an empty cavity.

The evidence being so strong, we now decided to use electricity. A strong Faradic current—as strong as the patient could bear it—was passed through the tumor. An olive-shaped insulated metallic bulb, coated with chamois leather, was made the terminal of one pole introduced within the rectum, while by an ordinary sponge electrode the other was applied over the tumor in the hypogastrium. The applications were of seven minutes' duration, and repeated daily five times and every other day twice. The immediate effect was to increase the size, pain and tenderness of the tumor. After the third or fourth application the *bruit de souffle* was stilled. In a few days after the cessation of the faradisation, a marked diminution in the size of the mass took place. The pain and tenderness had also markedly subsided. But shortly afterwards labor-like pains and moderate bleeding came on. On the second day of these symptoms, I visited the patient and found the cervix so dilated that I could with perfect ease reach the fundus with my finger. A decidual membrane was being detached from the endometrium, otherwise the cavity was empty. This membrane I peeled off. The bloody discharge ceased in a few days. After this she improved so much that I ventured to consent to her leaving her bed and going to a couch in the same room, but this proved unfortunate, for she immediately began to suffer from what we took to be symptoms of inflammation and suppuration in the tumor. It became very painful, tender and swollen, and presently a red blush with slight œdema of the surface appeared. Temperature rose three or four degrees, and altogether her condition gave us much anxiety for a week or two. These symptoms occurred on the closing days of March and first week of April. During this period, while I was absent in New York, she was seen by my friend and colleague, Dr. Shepherd. The question of incision and drainage of the supposed abscess cavity was seriously con-

sidered, but unexpectedly she began to improve in every respect, and a few weeks afterwards was able to leave her bed.

On the 15th June I had an opportunity of visiting and examining the patient. I found her out of bed, dressed, and able to go down stairs. She was pale and thin, but expressed herself as having a fair appetite and good digestion. She had menstruated twice since the beginning of April; profusely on both occasions. Slight pain of hypogastrium still complained of, increased by exertion. Bladder still irritable. On examination, the tumor in the right iliac region is still present, but greatly reduced in size. Per vaginam, the mass to the right of the uterus is to be felt, but also reduced in size. The uterus is decidedly firmer and smaller, measuring $3\frac{1}{2}$ inches.

Remarks.—That the case now related was really one of extra-uterine fœtation can, I believe, admit of no doubt. The history, symptoms, the suspicions of the patient, the result of pelvic examination, the results of treatment, and, lastly, certain events after the use of the electricity, particularly the labor-like pains, hæmorrhage and expulsion of decidual membrane, combine to form a mass of evidence which cannot be controverted. The induration of the mass was perhaps exceptional, but easily enough accounted for by peritoneal and cellular inflammatory thickening. As regards the particular part or organ in which the fœtation was lodged, there does not seem any reason to doubt that it was (at least primarily) the relatively common tubal variety. The history and previous symptoms further show that the case is no exception to the rule that extra-uterine pregnancy occurs in women advanced in sexual life who have hitherto been sterile, absolutely so, or for a long term of years, and have suffered from pre-existing uterine disease. It is more than likely that there was chronic disease of the Fallopian tubes, with its obvious predisposition to the condition.

Extra-uterine pregnancy justly excites much interest in the medical mind. The difficulty of diagnosis in many cases, the fact that in a goodly number no opportunity has been afforded to make a diagnosis, the patient either not having consulted a practitioner or no examination having been made, the sudden

tragic, perhaps fatal termination being the first intimation of the true nature of the case, amply account for this. Within the last five years this interest has become more intense. This is in part due to the fact of increased activity of discussion of all gynæcological topics, but mainly to the success of certain modern methods of treatment. I have alluded to the difficulties of correct diagnosis. But it is, indeed, doubtful if it be much more difficult to diagnose extra- than intra-uterine pregnancy during the first three months. All who make frequent examinations of the female sexual organs, or who are much consulted in this class of cases, will agree with me that it is often necessary for all but rash men to suspend judgment till, by the lapse of time, a doubtful case is cleared up. The treatment of extra-uterine fœtation by electricity and other agents which have for their object the death of the fœtus, to be successful, must be employed early, preferably between the second and third month, otherwise the fatal rupture so often occurring at this period may not be anticipated. Hence the importance of early diagnosis. Failure to diagnose the condition is doubtless sometimes due to an impression in the professional mind that the condition is extremly rare. This is erroneous. Dr. Garrigues of New York, while preparing a paper on the subject for the American Gynæcological Society three years ago, read the reports of 200 cases all published within four years. In January 1885, Thomas reported to the New York Obstetrical Society his thirtieth case. It is, of course, uncommon, but, compared with many other abnormalities of gestation, it is not so very rare. As in many other conditions difficult of diagnosis, mistakes would be few if it were borne in mind as one of the causes of pelvic symptoms, and, above all, if careful systematic examinations (under ether if necessary), were made.

To Dr. J. G. Allen of the United States we owe the successful employment of the faradic current in extra-uterine pregnancy. His first case occurred in 1869; the second in 1871. Since then, and especially during the last five years, a goodly number of successful cases have been reported, especially in the United States. The galvanic current, applied by puncture and exter-

nally by interruptions, has also been successfully employed, but it is more troublesome by whatever method selected, and no more efficacious than the induction apparatus. The dangers of puncture, from inflammation and suppuration of the sac are such as to render it, in my opinion, quite unjustifiable. Notwithstanding these facts, the value of the method is far from being generally appreciated, especially in Britain. The Barnes', father and son, in the first volume of "Obstetric Medicine and Surgery," published in 1884, dismiss it with a notice of a line and a half, giving it no prominence; on the contrary, rather advocating tapping of the cyst with the aspirator needle in preference to any other treatment. A great merit of the faradic current is that it is so easily applied as to be within the capacity of the merest tyro in the therapeutic use of electricity. In the great majority of successful cases, the current has been applied as described in our case. Another great advantage is, that if unsuccessful, it can do little, if any, harm. In case of mistaken diagnosis, if the pregnancy be uterine, the worst result is abortion. Such an occurrence cannot be admitted as an argument of any weight when the probability of the existence of so grave a condition as extra-uterine fœtation is great. The other great step in the treatment of extra-uterine pregnancy is an outcome of the rapid progress of abdominal surgery, and is one of Mr. Lawson Tait's many contributions to that department of surgery. It is for the most part applicable to cases in which suddenly occurring and urgent symptoms of rupture and hæmorrhage are present. It consists in abdominal section, removing the fœtus, clots, etc., ligating the affected tube, and then excising it. The indications then in the treatment of extra-uterine fœtation when diagnosed during the first four months seem clear. If no evidences of internal hæmorrhage be present, the induced electric current is to be used with the object of killing the fœtus. If rupture have occurred, however desperate the spmptoms, the belly is to be opened, and the bleeding point having been secured, the cavity is well sponged out and drained before being closed. The case here reported is offered as a contribution to the literature of the subject, and is, so far as I know, the first reported case treated by electricity in the Dominion.

NOTES ON THE MORBID ANATOMY OF TYPHOID FEVER.*

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Historical note.—The careful study of the morbid anatomy of continued fevers led to the recognition of typhoid or enteric fever as a specific disease. The younger men among us can scarcely realize that the generation has not yet passed away by whose labors the profession finally reached a clear and positive knowledge of the differences between typhus and typhoid fevers. The dates 1813 and 1850 include the modern discussion of the subject. Long before 1813, however, many observers had noted the clinical differences between the diseases, so well laid down by Huxham in his essay on Fevers (2nd ed. 1750); and Baillie had figured and others had described the intestinal lesions of fever, but in that year Pierre Bretonneau of Tours distinguished "dothinenterite" as a separate disease, and Petit and Serres described entero-mesenteric fever. Trousseau and Velpeau were students of Bretonneau, and in 1820, when they went to Paris, were instrumental in making known his views to Andral and others. In 1829, Louis' great work appeared, in which the clinical and anatomical features of the disease were presented in a manner not previously attempted. The constancy of enteric lesions was demonstrated, and the name *typhoid* given to the disease. At this period, in Paris, typhoid fever alone prevailed, and it was universally believed to be identical with the continued fever of Great Britain, where, in reality, both typhus and typhoid existed together, and the intestinal lesions were regarded as accidental occurrences in the course of ordinary typhus. Meanwhile Louis' students, returning to their homes in different countries, had opportunities of studying the prevalent fevers in the thorough and systematic manner of their master. Among these were certain young American physicians,

* Part of third Pathological Report from the Montreal General Hospital.

to one of whom, Gerhard of Philadelphia,* is due the great honor of having been the first to clearly establish the difference between the two diseases. His papers, published in 1837 (*Amer. Jour. Med. Sciences*), are undoubtedly the first in any language to give a full and satisfactory account of the clinical, pathological and anatomical distinctions such as we now recognize. No student should fail to read these articles—among the most classical in American medical literature. Louis' influence was early felt in Boston, to which, in 1833, James Jackson, Jr., had returned, and in the same year demonstrated in his father's wards at the Massachusetts General Hospital the identity of the common typhus of the country with the typhoid of Louis. He had already in 1830 noticed the intestinal lesions in New England typhus. Though cut off at the very outset of his career, we may reasonably attribute to the inspiration of the younger Jackson the two elaborate memoirs on typhoid fever which, in 1838 and 1839, were issued from the Massachusetts General Hospital by James Jackson, Sr., and Enoch Hale. These, with Gerhard's articles, contributed to make typhoid—as distinct from typhus—widely known to the profession in America long before the distinctions were recognized in England. The recognition in Paris of a fever distinct from typhoid, and without intestinal lesions, was due largely to the influence of the able papers of G. C. Shattuck of Boston and Alfred Stillé of Philadelphia, which were read before the Societé Med. d'Observation in 1838. At Louis' request Shattuck went to the London Fever Hospital to study the English disease, and quickly saw that there were two distinct affections, and brought back a report which must have been very convincing to the members of the Society. Stillé had the advantage of going to Paris knowing thoroughly the clinical features of typhus, for he had been Gerhard's house-physician at the Philadelphia Hospital, and had studied the disease under him in the epidemic of 1836. At La Pitié with Louis he saw quite a different affection, while in London, Edinburgh, Dublin and Naples he recognised his old Philadelphia foe. The results of his observations

* Pennock was associated with Gerhard in his studies upon Typhus.

were given in an exhaustive paper, which presented in tabular form the contrasts and distinctions, clinical and anatomical, between typhus and typhoid fevers.

British physicians were curiously slow in recognizing the affections as distinct, and persisted in regarding the enteric lesions as only occasional concomitants of typhus. There were, however, notable exceptions. My preceptor, Bovell, always maintained that Bright, whose pupil he was, knew and taught the differences. True, we are indebted to the distinguished Guy's physician for the most admirable description and delineations of the morbid anatomy of the intestinal lesions in his Reports of Medical Cases, Vol. I., 1827, and in the first article of the first volume of Guy's Hospital Reports he pleaded, from the facts of morbid anatomy, for a more rational method in the treatment of fever, and denounced the administration of irritating purgatives as tending to keep up the intestinal disorder; but I cannot find that he had a clear and distinct idea of two forms of fever—one with, the other without enteric lesions. Bright, however, strongly impressed upon his pupils and the profession the evil consequences of the purgative plan of treatment in fever—a plan by which, as Stokes asserted, British practitioners had killed thousands.* In Great Britain, the non-identity of typhus and typhoid was first clearly established at Glasgow, where, from 1836-38, Dr. A. P. Stewart studied the continued fever. The results of his observations were published in 1840, and his memoir has been reprinted (1884) by the New Sydenham Society. In the decade which followed many important works were issued and the more correct views gradually gained acceptance, but it was not until the publication of Jenner's observations, 1849-50-51, that the question was finally settled in England. The Irish physicians,

* The treatment of Fever forms an interesting and instructive chapter in the history of therapeutics, and illustrates the necessity of correct pathological views in the management of a disease. Nathan Smith, who in 1824 described the typhous fever of New England, was one of the first to advocate the rational or expectant treatment of the disease. With trifling exceptions, his method corresponds to "the most approved treatment of enteric fever of the present day" (1884), as given by Mahomed in the "Year Book of Treatment."

to whom we owe so much on the pathology and treatment of fever, were among the last to abandon the old views, and even as late as 1861 the identity of the diseases was maintained among them.

The extraordinary difficulty of establishing on an incontrovertible basis any great truth in medicine, is nowhere better illustrated than in the history of the subject which I have outlined in this imperfect and sketchy manner. Too often a truth has to grow to acknowledgment with the generation which announced it. After the intellectual climacteric—*la crise de quarante ans*—we assimilate new truths slowly,* and some by training become incapable of their reception. This was the case with many an ardent student of Fever, whose education had unfitted him to see a truth which the untrammelled mind readily grasped. Dwelling now in the clearer light and with fuller knowledge and looking back over the half century of doubt, dispute and discussion upon the question we have just considered, what lesson may we learn? Surely to see in it a picture of our own times—a picture the counterpart of which we can find any day in our current journals. The mists of doubt hang over many problems, disputes rage with the old intensity, discussion waxes hot, but by the light of history we can read with faith and trust the larger hope—in no faint manner—that a similar happy solution awaits many of the questions in pathology which to-day vex the mind of the profession.

Of the workers who were actively engaged in defining the distinctions between typhus and typhoid fevers three only, so far as I know, remain with us—Shattuck of Boston, Stillé of Philadelphia and Jenner of London. They, with their fellow-laborers who have passed before, have a claim on the gratitude of the profession which time can not efface but will rather deepen.

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From 60 to 80 cases of typhoid fever are admitted yearly to the wards of the General Hospital; of late the number has, on several occasions, exceeded 100 annually. For the ten years

* True to-day as in the time of Harvey.

ending May 1st, 1879, 660 cases were admitted, and the death rate was a little over 10 per cent. I have notes of 53 autopsies, which are arranged in tabular form at the end of the article.

Thirty-six of the cases were in males and 17 in females. As Dr. James Bell's statistical report shows,* very many more men are admitted to the hospital with fever, and the death-rate among them is slightly lower than in the women. Of 45 cases in which the age was given, 26 occurred in persons under 25 years of age.

In 16 cases there were no special complications.
" 11 " there was perforation with peritonitis.
" 9 " there had been hæmorrhage from the bowels.
" 6 " there were diphtheritic affections of mucous membranes.
" 2 " there was thrombosis of veins.
" 3 " pyæmia.
" 9 " affections of the respiratory organs.

Anatomical Lesions.—We shall speak first of the condition of the *alimentary canal*, in which the specific morbid changes chiefly occur.

No ulcers were met with in *pharynx* (or *larynx*). These parts were not examined in more than half the cases. In Germany ulcers in these regions seem to be much more common; the only cases I have ever seen were in the Berlin and Vienna post-mortem rooms. Murchison refers to them as rare in England. Necrosis of the laryngeal cartilages may occur. I have four or five large pieces of the alæ of the thyroid which were coughed up by a convalescent from typhoid, and I have recently had a patient with acute perichronditis which fortunately terminated in resolution.

There were no special alterations noted in *œsophagus* or *stomach*. The lesions of the *intestines* were all distinctive. The affection of Peyer's glands may be considered under the four stages recognized by all writers:

1st Stage. *Swelling and Hyperplasia.*—No matter at which

* Montreal General Hospital Reports, Vol. I., 1880.

period of the disease a patient dies, some of the patches will be found in this condition. It is rare, however, for death to take place before necrosis or sloughing has occurred. In *Case XVII.*, a girl, aged 24, died about the end of the first week with severe nervous symptoms. The patches of Peyer were much swollen, pitted and cribriform, but no sloughing had taken place. *Case XXXII.*, a man aged 63 ; there was great hyperplasia of the glands, particularly of the isolated follicles, but neither necrosis nor ulceration. The usual condition met with is sloughing or ulceration of the lower patches and swelling of the upper ones. In the early involvement one can frequently see with the unaided eye, or, better, with the assistance of a lens, the enlarged hemispherical follicles in a patch. The increase in size is due to a hyperplasia of the lymph elements, a process which also extends to the adenoid reticulation of the patches and the contiguous mucosa. The swollen condition of the lower part of the ileum is largely due to the great increase, intertubular and sub-mucus, of the lymph elements. The affected patches usually appear with great distinctness, projecting from the mucosa for a distance of a line or two, and present a greyish-white appearance. They can be seen from the peritoneal surface, and the portions of the bowel in which they occur can be felt to be thicker and firmer than contiguous parts. The solitary follicles are not always affected ; usually they are more or less swollen, and in rare cases they have been alone involved. They range in size from a pin's head to a large pea, and may be very deeply imbedded in the sub-mucosa. In the cæcum, appendix and colon the solitary glands may be greatly swollen. In *Case XXXII.* the solitary follicles of the ileum were very prominent, many of them almost pedunculated, which gave a very remarkable appearance to the bowel. There is generally hyperæmia of the mucous membrane, particularly about the patches, the situation of which may be plainly marked from the serous surface by deep congestion or ecchymosis. The swollen follicles undergo one of two changes—resolution or necrosis. In a majority of the patches the former process goes on. Even in the most severe cases, when six or seven feet of the bowel are involved, necrosis and ulceration do not often attack the

uppermost ones; while in mild, abortive cases the swelling probably subsides without proceeding in any patches so far as sloughing and ulceration. On the other hand, a fatal result may occur while the glands are still in this stage, due to the intensity of the fever or the action of the poison on the nervous system. In connection with resolution, a curious condition of the patches is produced whereby the surface assumes a reticulated or cribriform appearance. These *plaques à surface réticulée*, which were first accurately described by Chomel, are very common, and may be produced in two ways. Either the swollen follicles of a patch undergo resolution and shrink more rapidly than the surrounding framework, or, what is more usual, I think, the follicles alone, owing to the intense hyperplasia, become necrotic and disintegrate, leaving little pits to mark their places. Small, superficial hæmorrhages may result from the rupture of vessels in this process. I have several times seen small ulcers which seemed to have originated from the fusion of several of these little pits.

Some have thought that the pigmentation which is found about the glands in the patches of Peyer indicated past swelling or disease of these parts, but it is so common that in persons over 25 or 30 years of age we may consider it almost normal. It is represented in Peyer's original figure.* It is important to remember that this condition of hyperplasia of the lymph elements is not peculiar to typhoid fever. In children it is exceedingly common, particularly when death has occurred from intestinal affections. I have seen it, too, in measles, diphtheria and scarlatina. E. Hale† gives a good account of it as met with in children, and Bruns‡ discusses the various conditions under which it has been found. While there is nothing specific and distinctive about the swelling of Peyer's patches in typhoid, yet in adults we rarely meet with affection of these glands, associated with fever, in any other condition. Cases of typhoid occur in which death takes place rapidly before any distinctive symptoms are mani-

* De glandulis intestinorum 1637.

† Typhoid Fever, Boston, 1839.

‡ Vol. X Transactions of Pathological Society of Philadelphia.

fested, and inspection of the small bowel alone reveals the true nature of the disease. Such a case I saw not long since with Dr. Sinkler. A lady came to town, a distance of several hundred miles, to see a specialist about her eyes, arriving on Thursday morning feeling apparently well. On Friday and Saturday she was seriously ill, high fever, temperature reached 105°, diarrhœa and semi-coma. Death took place on Sunday, less than sixty hours from the first visit of the attending physician. The nature of the case was demonstrated by Dr. Longstreth, who made the autopsy, and found swelling with commencing ulceration of Peyer's patches. No doubt before she left her home she must have had slight fever, and we had been dealing with a case of ambulatory typhoid, with sudden accession of fever and head symptoms.

2ND STAGE. *Necrosis and Sloughing.*—When the hyperplasia of the lymph cells reaches a certain grade resolution can no longer take place, the vessels become choked, a state of anæmic necrosis is induced, and a slough forms, which must be separated and thrown off. The process may be quite superficial, affecting only the mucous tissue of the patch or even only a part of it, but usually it extends to and involves the submucosa. In *Case XXVI.* there were many thin sloughs adhering to the patches, in which the follicles and pitted appearance could be distinctly seen. It is always more intense towards the valve, and in severe cases the greater part of the mucous membrane of the last foot of the ileum may be represented by a dirty brownish-black eschar. The solitary glands may also be capped with small sloughs. They have a yellow-brown color from the bile pigments. The depth to which the necrosis extends depends on the intensity of the lymphoid infiltration; it may be deep in the muscular coat, or even reach the serosa.

3RD STAGE. *Ulceration.*—The separation of the sloughs is gradually effected from the edges inwards, and is associated with great and unavoidable dangers, of which the opening of blood-vessels and perforation of the coats of the bowel are the most serious. The size of the ulcer is directly proportionate to

the depth and extent of the necrosis. When superficial, the entire thickness of mucosa may not be affected, and small, shallow losses of substance may frequently be seen in swollen patches. It is more common for the slough in separating to expose the submucosa and muscularis, particularly the latter, which forms the floor of a large majority of all typhoid ulcers. It is not common for an entire patch to slough out, and the perfectly ovoid ulcer opposite the mesenteric attachment is rare. Irregularly oval or rounded forms are the rule. A large patch may present three or four ulcers, divided by septa of mucous membrane. Very often the terminal six or eight inches of the ileum is one large ulcer, with islets of mucosa left here and there. The smaller circular ulcers have often a punched-out appearance, and may be funnel-shaped, the central deeper part of the slough having reached through the transverse fibres or even to the serosa. The edges are usually swollen, soft, sometimes congested, but in cases in which death has taken place late in the disease, they are thin and pale, and not always undermined. At this period the ulcers near the valve may have very irregular sinuous borders. Sometimes on a patch we may see an ulcer which has encroached upon the neighboring mucous membrane as if the ulceration had extended after the separation of the slough. The base of a typhoid ulcer is smooth and clean, usually formed of the circular layer of muscle fibres, occasionally of the peritoneum alone.

4TH STAGE. *Healing.*—When death occurs late in the disease from exhaustion or perforation, we may have an opportunity of studying the process of repair in the ulcers. Thus, in *Case XXIX*, death in the seventh week from septicæmia, all the ulcers in ileum were cicatrizing and one or two had completely closed. The process begins with the development of thin granulation tissue, which covers the base and gives to it a soft, shining appearance. From the edges, the mucosa gradually extends over this on all sides with a new growth of epitheleum. The site of a healed ulcer is a little depressed, and is marked by pigmentation. Occasionally one sees an appearance as if an ulcer had healed in one part and was extending in another, but this is unusual. In some instances of relapse, with ulcers

healing in places there are fresh ulcers higher up in the bowel and patches in a state of hyperplasia. Theoretically, we may assume the healing to begin so soon as the sloughs have separated; indeed, when resolution is impossible, the removal of the necrosed parts is itself the first step in the process of repair, but practically we do not often in fatal cases meet with evidences of cicatrization. The majority of deaths occur before this stage is reached.

Large Bowel.—The cæcum and colon are frequently affected, but not to a severe degree. In nearly a third of the cases there were ulcers in the cæcum, and the solitary glands in this part and in the ascending colon were greatly swollen. In *Case XXIII.* the glands in the ileum were very small, while in the larger bowel they were very prominent. In one instance there was an ulcer in the appendix. In 1877 I dissected a case at the hospital, in which the patient died three or four months after an attack of typhoid fever. The appendix was perforated and surrounded by a localized abscess, and there was inflammation and suppuration of the mesenteric and portal veins with empyema.

Many cases of perforation of cæcum and of appendix in typhoid fever are on record.

Perforation.—In eleven instances death was caused by perforation and peritonitis. Of the ten cases in which it was noted, the orifice was found in seven within 8 inches of the valve. In only one was it distant 18 inches. In *Case XL.* there were two perforations—one at a distance of 7 inches, the other 2½ inches from the valve. In five cases the perforation was in ulcers from which the sloughs had separated, but in three of these it appeared, from the condition of the other patches, that the perforation was directly due to the extension of the necrosis through all the coats. In only two was the perforation at the bottom of clean, thin-walled ulcers. In *Case I* the fatal result could be directly traced to an indiscretion in diet nearly two weeks after the temperature had been normal. In six instances the sloughs were still partially adherent about the site of perfo-

ration. A majority of the cases were in small, deep ulcers. Peritonitis was present in every case; in two it was localized in the lower abdominal and pelvic regions. In several instances the base of ulcers was formed, wholly or in part, of thin, greyish peritoneal tissue, evidently necrotic, and great care had to be exercised to prevent tearing in removal of the bowel. I have once or twice seen the serous coating covered with thin flakes of lymph in the vicinity of such patches.

Hæmorrhage occurred in nine cases, and contributed directly or indirectly to the fatal result. In two, perforation also occurred. In five there was blood more or less altered in the cæcum and colon; in one case in the ileum itself. In most of the cases the bleeding seemed to result directly from the separation of the sloughs, but in no instance was the bleeding vessel found, not even in *Case XXXVIII.*, in which only one patch had sloughed. and the clot was still adherent. The soft, swollen edges of the patches may have been the seat of bleeding in one or two instances.

Mesenteric glands.—Except in two or three cases in which death took place late in the disease, the group corresponding to the ileum was invariably involved—swollen, sometimes congested, more often in a state of intense hyperplasia. I have seen softening and suppuration in several cases; the softening is apparently due to an anæmic necrosis similar to that which affects the lymph elements of the bowel. The glands may be very deeply congested, and I have found in such specimens many cells containing red-blood corpuscles. As has long been known, there are, in addition to the ordinary lymph cells, many larger cells with two or three nuclei.

Spleen.—Moderate enlargement of this organ constantly takes place in typhoid. It is rare—in my experience—to be able to palpate the anterior edge under the left costal cartilages. Of 35 instances in which the weight was accurately noted, in only one case did the organ weigh over 20 ozs.; in three about 19 ozs. In four cases the weight was below the average.

Complications—*Pulmonary.*—The hypostatic congestion is almost always met with when death occurs slowly. In 6 instances there was actual pneumonia, in 2 simple pleurisy, and in 1 empyema.

Pyæmia.—In *Case XXVIII* there were suppurating infarcts in the lungs, and in *Case XXXIII* infarcts in spleen and kidneys. In neither case could any disease other than the intestinal be discovered.

Thrombosis.—In *Case IX,* the right circumflex iliac veins were distended and filled with firm thrombi. The superficial veins on the right side of the abdomen were enlarged and prominent. In *Case XXIX,* in the 6th week, a thrombus formed in the left femoral and iliac veins, and in the former proceeded to suppuration, with intense phlebitis and involvement of the inguinal glands.

Diphtheritic affections.—Secondary membranous inflammation of the mucous surfaces is rare in typhoid fever. Louis mentions three cases in which diphtheria arose as a complication, and Murchison states that he has had several examples.

Six of the cases I have dissected presented more or less extensive inflammation of a croupous or diphtheritic character.

Case I (No. 12), female, aged 23. No special clinical features. Mucous membrane of pelvis of left kidney covered with a firm, greyish-white membrane, which could be stripped off in the form of a mould of the parts; deep congestion of subjacent tissues.

Case II, woman aged 35, admitted Nov. 25th. Had been ill for about two weeks. The case was tolerably severe, and lasted over eight weeks. Temperature-range during the first fortnight in Hospital was 103° to 104.5°. On December 31st it became normal. There was a good deal of nervous depression throughout. She had retention of urine, and was catheterized on several occasions, the first time on Dec. 4th. On the 14th there was a bloody discharge from the vagina; on the 23rd, bloody urine, and from this time shreddy matter was passed from the bladder. There was great pain on the passage of the catheter. Urine not diminished in amount. Death on Jan. 3rd. Temperature

normal for four days before the end. At the autopsy, healing ulcers were found in ileum. Spleen 95 grammes. The condition of the genito-urinary organs was as follows: *Kidneys* not enlarged, substance pale. On section, the pelvis and calyces were covered with a thick greyish-yellow exudation, in the left organ involving the entire membrane, in the right only the upper third. The surface of the exudation was rough, and on section it was seen to extend deeply, in some places 3 m. in thickness. It could not be lifted off the mucosa, but infiltrated it. The papillæ in two of the calyces were also covered. The ureters were not affected. *Bladder* contained a quantity of greyish, shreddy material and a membranous cast of the upper part of the organ, which had separated. It was about 2 m. in thickness, and was beginning to disintegrate. The parts about the neck were covered with a thick greyish exudation, which was with difficulty detached. In the central zone, there were many isolated patches projecting 2–4 m. The wall was of a dirty greenish colour, and was, in the greater part of its extent, denuded of mucous membrane. The orifice of the urethra was free, but the tissue about it was hæmorrhagic. *Vagina*—Mucosa in the lateral walls covered with a greyish membrane, which, in the right side extended, to the os, covering part of its margin. Towards the vulva the membrane surrounded the entire canal. It could be stripped off in flakes. The uterus was normal; no exudation in its cavity.

Case III (No. 36), male (young), admitted Feb. 22nd, with well-marked typhoid fever. All symptoms mild, except the diarrhœa, which was difficult to control. Pain and tympanites were troublesome. He was doing well, temperature had not once reached 103°, when on March 4th he complained of soreness in the caruncles beneath the tongue, and there was swelling beneath the chin at a corresponding point. The sore part was touched with nitrate of silver. On the morning of the 5th the swelling under the jaw had become more diffuse. Up to this time no increase in temperature, which was 101°, and the general symptoms did not indicate any serious change. In the evening the neck had become greatly swollen, and there was exudation on the pharynx. Temperature 102½°. Voice husky.

Swallowing impossible. Pulse weak. He passed a bad night, and on the 6th died asphyxiated at 2 p.m. rather unexpectedly, as at 1 p.m. the laryngeal symptoms were not very marked. Temperature at 11.30, 105°. The autopsy showed many ulcers and sloughs in lower part of ileum. There was great infiltration of all the tissues of lateral and anterior regions of the neck. Two small losses of substance on either side of frænum linguæ; œdema of pillars of fauces and uvula. Posterior part of soft palate was covered with a greyish membrane, which extended into the nares for a short distance. Posterior wall of pharynx covered with a similar membrane. Membrane on upper surface of epiglottis. Œdema and swelling of laryngeal folds; no exudation.

Case IV (No. 50), male, aged 39. Ordinary course, until perforation. No special symptoms. Pelvis of right kidney inflamed and covered with a thin sheeting of firm exudation.

Case V (No. 51), female, aged 43. Course of moderate intensity, and then severe laryngeal and bronchial symptoms. Many large ulcers in ileum. Extensive diphtheritic laryngitis, and a uniform membrane extended down the trachea and into the tubes of medium size.

Case VI (No. 52), female, aged 18. Death from the fever and exhaustion. Many intestinal ulcers. The vagina presented several patches of firm membranous exudation, beneath which the tissue was deeply congested.

Cases II, III and V may be regarded as instances of true diphtheria occurring in typhoid fever; the other cases as examples of local membranous inflammation, such as we meet with from time to time in the specific fevers.

Cases of Typhoid Fever examined post-mortem at the Montreal General Hospital, May 1876 to May 1884.

No.	Sex.	Age.	Cause of Fatal Result	Ulceration of Small Intestine.	Ulceration of Large Intestine.	Spleen.	Other Morbid Changes.
1	M	18	Perforation..	8 round ulcers in process of healing	O	19 ozs.	Peritonitis localized in lower part part of abdomen.
2	M	17	F*	Much swelling; few ulcers ...	O	11 ozs. ...	———
3	M	23	Pneumonia..	14 patches ulcerated.....	O	10 ozs.	Great swelling of kidneys.
4	M	40	Perforation .	7 deep ulcers in ileum.....	O	7 ozs.	Lymph only on coils in the pelvis.
5	M	25	F	4 small ulcers, sloughs detached	O	15 ozs.....	Peculiar brown color of upper Peyer's patches.
6	M	40	F	Glands swollen, no sloughs, one small ulcer.....	O	15 ozs.	Solitary glands much enlarged.
7	M	29	Perforation .	Sloughs adherent and detaching	O	395 grms.....	Hæmorrhage beneath left pleura and into lung substance.
8	F	18	F	Great swelling of glands, lower ones ulcerated.....	O	.....	Old peritonitis; tubercles in lungs.
9	M	27	F	Patches very large, ulceration beginning in lower ones...	O	Much enlarged.	Enlargement of veins on right side of abdomen. Thrombi in circumflex iliac veins.
10	F	20	Pneumonia..	All patches much swollen; six ulcers in lower ones....	O	215 grms.....	———
11	M	25	F	Ulcers healing in places; some patches much swollen.....	A few ulcers.....	315 grms.....	Cutaneous and sub-serous ecchymoses.

* F stands for fever and exhaustion.

Cases of Typhoid Fever examined post mortem at the Montreal General Hospital May 1876 to May 1884.

No.	Sex.	Age.	Cause of Fatal Result	Ulceration of Small Intestine.	Ulceration of Large Intestine.	Spleen.	Other Morbid Changes.
12	F	23	F	Only in lower 18 inches; two ulcers, many sloughs.....	One in cæcum ...	320 grms.....	Diphtheritic pyelitis in left kidney.
13	M	....	F	Lower 3 feet; ulcers deep, in places to the peritoneum ..	0	360 grms.....	——
14	M	30	Perforation .	Many sloughs and ulcers.....	0	Enlarged.....	——
15	M	22	Hæmorrhage.	3 feet; great infiltration and swelling, sloughs detaching, adherent clot on one ulcer.	0	360 grms.....	Much blood in colon.
16	M	30	F	5 feet; patches swollen, 3 ulcers in lower 8 inches.....	0	560 grs.	Great swelling of mesenteric glands.
17	F	24	F	All lymph elements swollen; patches cribriform	0	200 grms.....	Mesenteric glands scarcely swollen.
18	M	17	Perforation .	1 foot only; patches 1½ feet from valve normal; sloughs separating, one on the valve ...	0	153 grms.....	Heart muscle very pale.
19	F	24	Perforation ..	Only last foot and a half; sloughs detaching	0	270 grms.....	Deep congestion of lungs.
20	M	16	Hæmorrhage.	Extensive ulceration near valve, upper glands swollen.... .	Ulcers in cæcum..	450 grms.....	Much blood in colon.

21	F	17	Pneumonia ..	18 inches, sloughs detached ...	20 ulcers in cæcum	195 grms	———
22	F	25	Hæmorrhage.	2 feet; ulcers deep, sloughs separated; vessel not found.	0	220 grms.....	Great enlargement of mesenteric glands.
23	M	30	F	2 feet; sloughs detaching.....	One ulcer, 20 x 20 millimetres..	380 grms.....	Extravasation of blood about abdominal aorta.
24	F	25	F	3 feet, great enlargement of patches, sloughs forming...	0	400 grms.....	Solitary glands remarkably prominent.
25	F	35	Diphtheria ..	Ulcers healing.....	0	95 grms.....	Diphtheritic vaginitis, cystitis and pyelitis.
26	F	20	Pneumonia ..	Several feet; many sloughs; only one detached; ulcer extends to serosa	0	260 grms.....	Heart large and dilated.
27	M	33	F	2½ feet; many ulcers, some extend to peritoneum, a few healing.....	0	227 grms.....	Deep congestion of lungs.
28	M	....	Pyæmia.....	8 ulcers in ileum; one with slough in appendix	15 small ulcers in cæcum, many in colon	610 grms.....	Pyæmic infarcts in lungs.
29	M	26	Septicæmia..	3 feet, many ulcers, some have cicatrized	Many small ulcers in cæcum and colon.....	180 grms.....	Suppurating thrombus in left femoral vein.
30	F	34	Perforation .	Sloughs adherent, ulceration beginning	0	Very large	Peritonitis very extensive.
31	M	13	Empyema ...	Patches swollen and congested, no ulceration	0	Large.....	Pleurisy. Hæmoptysis seven days before death; no lung disease.

Cases of Typhoid Fever examined post-mortem at the Montreal General Hospital, May 1876 to May 1884.

No.	Sex.	Age.	Cause of Fatal Result	Ulceration of Small Intestine.	Ulceration of Large Intestine.	Spleen.	Other Morbid Changes.
32	M	63	F	Patches enlarged, cribriform, peritoneum hyperæmic, extraordinary enlargement of solitary glands	O	Not enlarged ..	Mesenteric glands enlarged.
33	M	....	Pyæmia	2 feet; many ulcers	Many ulcers in cæcum	Large suppurating infarct	Pyæmic blocks in kidneys; abscess in abdominal wall.
34	M	25	F	2 feet, two large patches; great swelling, no ulceration	Solitary glands much swollen	533 grms.....	Tuberculous cavities in lungs.
35	F	21	Perforation .	3 feet, many ulcers.....	O	Very large	Heart pale.
36	M	....	Diphtheria ..	3 feet; sloughs and ulcers, some extend to peritoneum, one at orifice of Meckel's diverticulum ilei	Follicles much swollen	633 grms.....	Diphtheria of fauces.
37	M	36	Hæmorrhage	2 feet, deep ulcers, sloughs detached.....	Few in cæcum...	320 grms.....	Hypostatic pneumonia.
38	M	28	Hæmorrhage	2½ feet, patches swollen; one slough separating.....	Glands enlarged	350 grms.....	Ileum and colon filled with blood; hæmorrhagic œdema of arachnoid.
39	M	....	F	18 inches, little swelling; one small ulcer.....	O	Slightly enlarged...	Congestion of lungs.

40	F	24	Perforation .	2 feet; nine sloughs adherent; two perforations	O	240 grms.....	Hæmorrhage also; peritonitis chiefly in pelvis.
41	F	17	F	4 feet, sloughs on lower patches, one patch 5 inches in length.	O	11 ozs	Great enlargement of mesenteric glands.
42	M	....	F	18 inches, few ulcers.....	Ulcers in cæcum.	5 ozs.....	———
43	F	19	Hæmorrhage	3 feet, sloughs adherent; one deep ulcer with adherent clot	O	Enlarged	———
44	M	29	F	4 feet; sloughs adherent.....	O	20 ozs.....	Temperature over 109°.
45	M	19	Perforation .	1 foot; patches above this normal. Small deep ulcers near valve	O	153 grms.....	Hæmorrhage as well. Death on 50th day.
46	M	27	F	2 feet; sloughs separating	6 or 8 sloughs...	380 grms	Petechiæ in skin. Extravasation along aorta.
47	M	16	Hæmorrhage	3 feet; great enlargement of patches and solitary glands, sloughs deep and separating.	O	Enlarged.....	———
48	M	36	Pneumonia .	Ulcers close to valve; above, sloughs adherent	O	Slightly enlarged ..	———
49	M	....	F	3 feet; many sloughs; ragged ulcers near valve.....	Small ulcers in cæcum.....	.....	———
50	M	39	Perforation .	12 inches; deep ulcers.....	Follicles swollen.	300 grms.....	Pyelitis of left kidney.

Cases of Typhoid Fever examined post-mortem at the Montreal General Hospital, May 1876 to May 1884.

No.	Sex.	Age.	Cause of Fatal Result	Ulceration of Small Intestine.	Ulceration of Large Intestine.	Spleen.	Other Morbid Changes.
51	F	43	Diphtheria ..	4 feet; many large ulcers	O	355 grms.....	Pleuritic effusion in left side. Extensive diphtheritic laryngitis, with extension of membrane into bronchi.
52	F	18	F	5 feet; patches swollen; ulcers near valve	O	.....	——
53	M	....	F	15 patches, covered with sloughs; one large ulcer ..	O	Very large	——

CASE OF TETANY OF FIVE YEARS' DURATION.

By JAMES STEWART, M.D.,
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(*Read before the Medico-Chirurgical Society of Montreal, June* 12, 1885.)

A. C., aged 39, through the kindness of Dr. McConnell, consulted me about two months ago, complaining of diarrhœa and "spasms of the face, arms and legs." His diarrhœa began seven years ago, and has been more or less constant ever since. The spasms of the muscles of the limbs and face, which are of an intermittent character, first troubled him about five years ago. During the late American civil war he served as a private soldier throughout many of the Virginia campaigns. He had three attacks of malarial fever, and for eighteen months suffered from chronic dysentery; and it was not until he moved to the Western States, after the termination of the war, that he completely recovered from it. He never had either syphilis or rheumatism; never drank to excess; worked at his trade (stone-mason) until eighteen months ago, until he was no longer able on account of gradually-increasing general weakness and the stiffness of the muscles of his hands. In 1863 he received a severe scalp wound from a sabre, which healed in a short time. The family history is unimportant.

Patient is tall, emaciated and anæmic, with an anxious and careworn expression. About once a month the muscles of his fingers, hands and arms become the seat of tonic contractions, which generally last from ten to twelve days. The thumbs become adducted and opposed, while the fingers are adducted and semi-flexed. The contractions come at times suddenly, but usually are slow in making their appearance, and gradually increase in severity day by day up to the tenth or twelfth day, when they suddenly begin to decline, the parts becoming normal in about twenty-four hours. When the spasms are what he calls severe, the adductors of the upper arms become involved, bringing the arms crossed in front of the body, the forearms being usually semi-flexed. For some hours before, and during the

whole time that the tetany is present he has a disagreeable feeling of numbness in his fingers. The dorsum of his hands swell and become very painful also during this period. The pain is especially severe when an attempt is made to move the contracted muscles. The muscles of the face are usually more or less contracted at the same time. He has a feeling as if the skin was too tightly drawn across his face. The facial muscles are also the seat of almost constant fibrillary twitchings. The muscles of the lower extremities are only occasionally the seat of spastic contractions; when they are, the feet and toes are in a state of plantar flexion, the feet being turned inwards and the thighs adducted. During the existence of tetany he has diplopia.

The electrical reactions of the nerves and muscles affected are enormously increased. During the past week, while he was suffering from one of his usual attacks, contraction of the facial muscles was induced on the application of galvanism to the facial nerve by a strength of current not exceeding ·25 of a milliampère (measured by Edelmann's galvanometer), while at the present time, when his muscles are no longer rigid, the tetany having passed away, it takes 3 milliampères to produce a similar result. There is a corresponding difference in the reactions of the radial, ulnar and median nerves.

	Normal period.	*Tetany period.*
Facial	3.0 milliampères.	.25 milliampères.
Radial	5.00	1.00
Median	4.25	.50
Ulnar	3.50	.50

Since coming under observation, the two attacks which he has suffered from have not been attended by contraction of the muscles of the lower extremities. On this account their electrical reactions have not been ascertained. Five milliampères is sufficient to produce tetanic contraction on the shutting of the kathode (K S Te) and on opening the anode (A O Te). There is no change in the normal formula, the K S Z $<$ A O Z. The difference in the reactions of the nerves and muscles to the induced current during the tetany and after it has passed away is not marked. In fact, the interossei require a much stronger current to produce their contraction during the tetany state than

during the normal condition. This is plainly owing to the œdema of the hands during the attacks, the œdematous tissues greatly increasing the resistance. The muscles, although flabby, are in a fairly nourished condition. The patellar reflexes are greatly exaggerated during the period of tetany, while after it has passed away it is frequently impossible to produce any contraction of the quadriceps when the patellar tendons are struck. The triceps and biceps reflexes are exaggerated during the tetany period, and absent after the muscles have become normal. No ankle clonus at either period. There is nothing definite to be made out in regard to the superficial and organic reflexes.

The tongue is constantly in a raw-looking state. The appetite, however, is usually fair. He is seldom free from diarrhœa, the average number of stools in the twenty-four hours being usually about six; only very seldom is there one stool in the day. The diarrhœa always moderates when the tetany makes its appearance. The abdomen is constantly distended; stools are large, frothy, semi-fluid, and look like pea-soup. The urine is acid, but normal in quantity, specific gravity 1030; contains great excess of both urea and indican, but is free from albumen and sugar. At times he becomes deeply jaundiced. There is no further evidence, however, physical or subjective, of disease of the liver. The apex of the heart is in the normal position. There is no increase in the cardiac dulness, neither is there is any other evidence of cardiac disease. Nothing abnormal in the respiratory system. There is no relative increase in the number of the white-blood cells; the red appear to be normal. There is no enlargement of the spleen.

Remarks.—We have here to do with a case of chronic diarrhœa of some seven years standing, with intermittent tetany of five years' duration. Tetany is a disease which has been known for some years. First described in France by Corvisart, later and more fully by Trousseau, but it is to Weiss and Chovstok of Vienna and Erb of Heidelberg that we are indebted, in the main, for our present knowledge of it. There are three apparently distinct forms of this disease, forms which differ much in the causes which give them origin and in their prognosis, but

little in the clinical pictures which they present. By far the most variety common of this disease is known as "rheumatic" or epidemic tetany.

The second variety of tetany is more chronic, and is due to either chronic diarrhœa, prolonged lactation, or other debilitating influences. The third form follows operations for removal of enlarged thyroid glands.

Clinically, these varieties differ somewhat. The so-called rheumatic form being essentially an acute affection, coming on suddenly and terminating usually inside of two weeks, the spastic periods of a few hours' duration intermitting with normal periods. Recovery nearly always occurs. The chronic form, due to debilitating agencies, differs little from the acute form, except in duration. Recovery in these cases nearly always occur also. The so-called surgical variety of the disease generally makes its appearance about a week after extirpation of enlarged thyroid glands, and especially when the subject has been a young female. Many of these prove fatal within a few days, while a number become permanently chronic. Early and complete recovery is very exceptional.

Judging from published observations, tetany is an extremely rare disease on this side of the Atlantic. In England it is equally rare. On the continent of Europe it is quite common, especially in France and Germany. This is true of all forms of the disease. In Vienna, not a winter passes without an epidemic of it, while cases of the chronic and surgical varieties are not at all rare. Up to May 1883, Billroth performed 78 operations for removal of goitres, 12 of which proved fatal, 6 of these deaths being directly due to tetany. In all, there were 13 cases of tetany following the 78 operations, 6 of which ended fatally. Two of the fatal cases ran a course of upwards of one year, while the remaining four terminated within two weeks.

Pathology.—There is nothing definitely known. In the very few cases where a histological examination of the nervous structures has been obtained after death, no lesion to account for the symptoms present during life could be discovered.

I have in my possession sections of the cervical cord of a

young girl who died from tetany two weeks after the removal of an enlarged thyroid gland, the only noticeable change being in the finely granular protoplasm of the ganglion cells of the anterior horns; the granules being considerably larger than they normally are. A few swollen ganglion cells are also noticeable. Simply saying that tetany is due to an exaggerated excitability of the spinal gray matter means nothing. How this excitability is induced remains unanswered. On the theory that the cerebellum is the centre for continuous movements, and the cerebrum for changing movements, Dr. Hughlings-Jackson has advanced the proposition that the phenomena of tetany are best explained by defective antagonism of cerebellar influences. That during the tetanic period the cerebral influences are removed.

To explain how causes, seemingly so diverse in their operation, as "rheumatic influences," diarrhœa, lactation, and operative interferences on the thyroid glands, can induce similar symptoms is very difficult. At one time it was thought that those cases following thyroid removals were due to injury of the recurrent laryngeal nerve during the operation. Cases of tetany, however, follow this operation, no matter what care may be taken in avoiding this nerve; it is therefore fair to conclude that there is no direct causative connection, especially when we take into account the fact that irritation of the recurrent laryngeal nerve from the pressure of tumors does not induce this disease. The active cause in the case reported is undoubtedly the diarrhœa, but whether induced by the direct impoverishment of the nerve centres, or through the constant peripheral (intestinal) irritation, it is impossible to say. The late N. Weiss of Vienna considered peripheral irritation to be the cause of the disease. He believed that this gave rise to alternate waves of vessel dilatation and contraction. During the former state we have, according to this assumption, the tetany period, while during the latter the muscles return to their normal condition. This theory might possibly explain cases like the one under observation and those following goitre removals, but it could not apply to the "rheumatic cases."

Treatment.—No medicinal agent has any power in absolutely

preventing or diminishing tetany. Billroth speaks favorably of the application of ice to the cervical spine. Erb, Chovstok and Weiss look upon galvanism as the only agent of any real value. Erb believes that it considerably shortens and ameliorates the attacks. He recommends the K A to be applied to the sternum while the A N is to be applied to the diseased parts in succession, including the muscles, main nerve trunks, and the cervical portion of the spinal cord. Since this patient was exhibited to the society, an attack was apparently averted by galvanization of the radial nerves.

QUARTERLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

Prepared by WILLIAM GARDNER, M.D.,
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Diagnosis of Specific from Simple Inflammation of the Vagina.—At a recent meeting of the Paris Obstetrical and Gynæcological Society, Martineau stated a most important fact by which gonorrhœa can be diagnosed from other inflammations of the female sexual organs. In the specific form the pus is always acid, while in the simple it is alkaline. It is therefore easy to decide the question by a piece of litmus paper. The value of the fact (if verified) with reference to rape is obvious. If the person committing the rape was affected with gonorrhœa, the discharge from the parts of the female would be acid.—*Philadelphia Medical News.*

Remarkable Neurosis from Uterine Displacement.—Dr. Aveling, of London, reports in the *Lancet* of July 4th, 1885, the following case:—The patient was a married lady of 38, the mother of a family; no history of hysteria or other neurosis. In October, 1884, one of her children struck her left eye with the back of his head. Six weeks after, she felt something wrong with the eye, and had noises in the ears, tenderness of the nose and pain at the back of the head when she stooped or had the bowels moved; she had also hesitation and stammering of speech. These symptoms gradually got worse till March,

1885, when she had three blisters on the nape. The headache became constant, and was accompanied with vomiting. During this time she was seen by several eminent London physicians and surgeons. Finally, she spoke to her ordinary medical attendant about certain pelvic symptoms she had felt for a long time. These were feelings of weight, and bearing down and dysuria. The physician examined and found extreme anteversion of the uterus, with a full bladder, the fundus of the uterus resting on, and making as it were a bed for itself in, the bladder. On replacing the uterus and emptying the bladder, all the head symptoms disappeared. The relief was temporary—with return of the displacement the symptoms returned. Lying with the hips raised on a high pillow also relieved the symptoms. Dr. Aveling was called in consultation, and succeeded in giving complete relief by inserting a Graily Hewitt cradle-pessary. Six weeks afterwards, the relief continued.

The Causes and Prevention of Sublimate Poisoning from Irrigation of the Puerperal Uterus and Vagina.—In a paper in the *Archiv. für Gynäkologie* (Bd. XXV., Hft. 3), Dr. Otto von Herff discusses this most important subject. In my last report, published in the May number of this journal, I drew attention to the dangers of this remedy. A number of fatal cases and the modes of death were then alluded to. There can be no question of the danger of this remedy. There is, at the same time, no question as to its great value. A critical enquiry as to the causes of danger, with a view to their avoidance, may therefore be most profitable. As a result of his labors in this direction, the author concludes :—

1. That a considerable quantity of fluid may be retained in the vagina after an injection by the constrictor vaginæ and levator ani muscles.

2. That toxic phenomena, after vaginal and intra-uterine injections in puerperal cases, arise mainly from absorption of the fluid through the vaginal *mucosa*, as, in the case of uterine injections, the fluid usually excites firm contraction of the uterus, thus closing any avenue of entrance to the circulation and securing expulsion of contents.

3. Absorption through the vagina is only possible when prolonged contact of the fluid obtains, especially when such contact occurs with increased intra-vaginal pressure.

4. It is probable that in most of the published cases of poisoning the absorption took place principally through the vagina. In two of these cases vaginal irrigation only was practised.

5. Direct entrance of corrosive sublimate solutions into the abdominal cavity or circulation results from increased pressure in the vagina from contraction, or when the Fallopian tubes are unusually patulous. Such an occurrence is rare, and can only happen when the irrigating fluid escapes imperfectly.

6. In all vaginal and uterine injections with sublimate solution, the greatest care must be taken to secure free return flow and so prevent any retention of the fluid, especially under pressure.

In order that the dangers of sepsis to lying-in women may be reduced to the minimum, Von Herff recommends :

1. Careful disinfection of accoucheur, midwife and nurse.

2. At the outset of labor, careful bathing of the genitals with weak sublimate solution and removal of the pubic hair.

3. During normal labor, prophylactic vaginal injections are superfluous. Only in cases of suspicion of infection from the attendant or in suspected decomposition of the secretions, as in tedious labor, are vaginal injections of 1–3000 or 5000 corrosive sublimate solution necessary.

4. Similarly, prophylactic intra-uterine injections after normal labor are equally unnecessary. They are only necessary when the hand has been introduced within the uterus, when any putrefaction of uterine contents has taken place, or after the birth of a putrid or macerated fœtus.

5. The remedy is unnecessary, and may be injurious, during a normal puerperium. But, on the other hand, in puerperal disease requiring intra-uterine treatment, it must be thus employed, and is usually most efficacious.

6. The stronger solutions of say 1–1000 are only to be used in dangerous puerperal fever.

For the actual performance of irrigation with sublimate solutions, the author lays down the following rules :

1. Use small quantities of the fluid—one or at most two quarts.

2. Perform the operation of irrigation as quickly as possible.

3. Secure free return flow both during and after the irrigation, especially in cases where there seems to be free escape of fluid. For this purpose a finger is to be inserted in the uterus or vagina, as the case may be, by the side of the tube and the retracted perineum. In cases of suture of lacerated perineum, a return-flow tube may be necessary. The author further recommends that in extensive wounds of the genital tract irrigation with corrosive sublimate solution is to be avoided entirely; also in anæmic persons and those affected with chronic kidney disease, and in women who have been treated with mercury they are to be used with great care or dispensed with entirely. The accoucheur himself only is to administer intra-uterine injections. The very weak solutions of 1–5000 are alone to be entrusted to nurses. The best apparatus for administration of the douches is one which, through height of its fall, secures a continuous flow. For this purpose 26 inches is all that is necessary. The utmost cleanliness of instruments and all surroundings is necessary.

A New Oxytocic.—Dr. Arbery of Wotasulga, Ala., U.S., in a short paper in the *New York Medical Record* for July 25, '85, draws attention to the value of heat applied over the fundus of the uterus as an excitor and stimulant of uterine contraction during labor. The author's method is to apply poultices of mush as hot as they can be borne, and changed frequently. He relates a number of cases in which this remedy succeeded promptly after ergot, alcohol and quinine had failed. The remedy is well worthy of a trial and report of the results by our readers. As Dr. Arbery remarks, "it is certainly pre-eminently above all the oxytocics for safety and simplicity, as the case can be hastened or slowed at option by simply putting on or withholding the hot applications."

The Medicinal Treatment of Uterine Hæmorrhage.—A year or two ago, in one of these reports, I drew attention to a paper by Prof. Schatz of Rostock on the value of Hydrastis Canadensis

or Golden Seal. This paper was read before the annual meeting of the Society of German Physicians and Naturalists, held at Freiberg in 1883. It will be remembered that Schatz's experience of the drug in uterine hæmorrhage from quite a variety of conditions, including myoma, was most favorable.

Dr. Mendes de Léon, Privat-Docent at the University of Amsterdam, gives his experience with Golden Seal in a paper published in the *Archiv für Gynäkologie* (Bd. XXVI, Hft. 1, 1885). He has found it a most useful remedy in uterine hæmorrhage occurring in the following conditions :—

1. Menorrhagia due to increased determination of blood to the uterus, attended with, it may be, increase of pain, even of colicky character. But in dysmenorrhœa depending upon obstruction to the escape of menstrual blood, and in the so-called spasmodic or neuralgic dysmenorrhœa, which often ultimately becomes complicated with profuse menstruation, the drug has no effect.

2. In catarrhal inflammation of the *mucosa* of the uterine body and cervix. This is an important fact, in view of the great frequency of this disease, the most common of all uterine affectons.

3. In chronic pelvic cellulitis, in which, as is well known during the menstrual period, there is sometimes quite severe pelvic pain due to excessive congestion.

4. In displacements, especially retroflexion and retroversion, in which menstruation is often painful and prolonged. It is especially indicated when from adhesions the uterus cannot be replaced.

5. In climacteric menorrhagia.

Dr. Mendes de Léon has had very little experience of it in bleeding myoma. He appends short notes of a number of cases in which the drug was decidedly useful. His method of administration is to order 15–20 drops of a strong tincture or fluid extract four or five times a day to be taken during the fortnight preceding the advent of the menses. In some of the cases it was given throughout the intermenstrual interval.

The Thermo-cautère in the Treatment of Chronic Metritis. —In a paper published under the above heading in the *Central-*

blatt f. Gyn. (No. 29, July 18, '85), Dr. Schwarz of Halle discusses the relative merits of cutting surgical operations, and compares them with thermo-cautery of the cervix in the treatment of chronic metritis. For extreme cases of disease, with marked hypertrophy of the uterus, especially of the *mucosa* and parenchyma of the cervix, he thinks that the wedge-shaped excision of both lips so warmly recommended by Schröder and Martin, and generally practised in Germany, is the best treatment. The merit of this operation is that it not only removes a considerable portion of the diseased tissue of the cervix, but it institutes a more or less rapid involution of the whole abnormally vascular and hypertrophic organ. Both by the deep lateral incisions and the excision of portions of tissue a considerable number of enlarged arteries and veins are opened, and so their atrophy or closure secured. This atrophy extends some distance beyond the incisions. But it may proceed too far. The uterus may become small, hard and cirrhotic, and menstruation become too scanty or entirely cease. Further, such an operation involves anæsthesia, loss of blood, and, in certain nervous women, serious disturbance of assimilative processes and, in very rare cases, fatal results. Moreover, it renders the presence of assistants necessary, and a longer interference with the liberty of the patient. In certain cases, excision is rendered difficult or impossible by reason of high fixation of the uterus, or contra-indicated by para- or perimetritis, or the patient objects. In retroflexions, moreover, excision of the lips reduces so much the size and length of the vaginal portion as to seriously interfere with or render impossible replacement by pessaries. In mild cases, and others in which, for one or more of the reasons mentioned, excision seems not feasible, the author uses actual cautery applied by Paquelin's apparatus. He makes wedge-shaped or circular eschars involving as much as possible of the diseased tissue with its blood-vessels. The extent of such excisions is in length 1½–2 cm. and ½ to 1 cm. in thickness. Smaller portions may be removed than with the knife, and yet the ultimate reduction of size of the uterus may be equal. The operation requires but a few minutes of time, may be done in one's surgery, and

skilled or any assistance is unnecessary. It is, as a rule, not painful to any extent. Anæsthesia is therefore not needed. The uterus need not be drawn down. After the operation the cervix is dusted with iodoform, and then the vagina packed with antiseptic gauze. The slough is usually cast off within eight days. The author's experience includes 30 cases, and he is much pleased with the results. I cannot but believe that many of the cases thus treated by Schwarz would have been better treated by Emmet's operation, which, when properly done, reduces the size of the uterus, involves removal of much diseased tissue without leaving cicatricial tissue, and does not shorten the vaginal portion and so complicate the treatment of the retroflexed or retroverted organ by pessaries.

Reviews and Notices of Books.

Handbook of Diseases of the Skin.—Edited by H. von Ziemssen, Editor of *Ziemssen's Cyclopedia of the Practice of Medicine.* Illustrated with 80 wood engravings and color prints. New York: William Wood & Co.

This is a translation of the book on Skin Diseases brought out by the publishers of *Ziemssen's Cyclopedia* last year. Messrs. Wm. Wood & Co., with commendable generosity, have published this work in handsome form and made a free presentation of it to the subscribers of the American edition of that work.

There are eleven contributors to this volume, most of them well known men in connection with syphilis and skin diseases. Dr. Paul Unna gives an exhaustive chapter on the Anatomy and Development of the Skin and Appendages, and is followed by Prof. H. von Ziemssen in a short chapter on the physiology. Next follows a very valuable contribution by H. Auspitz, of Vienna, on the General Pathology and Therapeutics of the Skin, which includes a classification of skin diseases. The various diseases of the skin are then treated of according to the group they come under. Prof. Schwimmer treats of Hyperæmiæ, Anæmiæ and Hemorrhages of the Skin, Chronic,

Deep-spreading Inflammations and Neuroses of the Skin, and, in association with Dr. Babes, the New Formations of the Skin. Dr. Th. Veiel describes the Simple Inflammatory Dermatoses, under which head comes eczema. Dr. Veiel believes that the predisposition to eczema differs in different individuals, and that debilitating influences will increase this predisposition. However, he does not think we are justified in separating eczema from these inflammatory symptoms caused by external irritants. He relies more on local than constitutional measures in treating the disease. Speaking of dyspepsia in connection with eczema, he says that dyspepsia is frequently the result, not the cause, of general eczema, as the constitutional school asserts. Professor Geber writes on Acute Deep-spreading Inflammations, Diseases of the Nails, Anomalies of the Surdoriparous Glands and Neuroma, Adenoma, Epithelioma-Molluscum and Carcinoma of the Skin. In erysipelas, Prof. Geber thinks no form of treatment of any value except the expectant and symptomatic. He advocates the application of cold compresses, because they are grateful to the patient. Prof. Neisser contributes the chapter on Chronic Infectious Diseases of the Skin. This includes leprosy, lupus, syphilis, actino-mycosis, etc. He holds that the evidence, as far as known, is against leprosy being hereditary. Accompanying this chapter is a map marking out the districts of the world affected with leprosy. In the map of America, the north instead of the south bank of the Gulf of St. Lawrence is marked as the seat of the leprosy settlement at Tracadie. Prof. Neisser looks upon syphilis as a bacterial disease. He also considers that the dual theory is by far the more firmly established, and that syphilitic virus is "altogether different from those noxæ which produce the forms generally termed 'soft chancres.'" Nothing is said about treatment, except that mercury is a direct poison for the bacteria of syphilis, and potass. iodide furthers the absorption of neoplasms. We have not space to notice all the articles in this interesting work, but may say that it is a most valuable contribution to dermatology, and although not likely to be very popular with the general practitioner because of the rather scanty directions

given as to treatment, still by those interested in dermatology as a science it will be much appreciated. The illustrations are good and the typographical work excellent.

A Theoretical and Practical Treatise on the Hemorrhoidal Disease.—By Wm. Bodenhamer, A.M., M.D. New York: Wm. Wood & Co., 1884.

The author of this work says, in his preface, that it is a remarkable fact that in America there is no complete classical or systematic treatise on Hemorrhoidal Disease, and therefore he sets about supplying the "long-felt want." We do not think it at all remarkable that a separate book of some 300 pages has not before been written on this subject, but do think it very remarkable that so much space has now been devoted to a disease which can be, and has been, fully treated of in the numerous works on the Diseases of the Rectum. The tendency of the day is for specialists to magnify their subjects and write large treatises on not only the diseases of each separate portion of the body but each separate disease of that portion. This tends to narrow rather than to broaden the view of the subject, and although more minute and elaborate work is produced the power of generalization is somewhat impaired.

Most of these special works are heavily padded; the one we are now treating of, if deprived of its padding (such as illustrations of instruments, curious poetical and prose quotations, history of the disease from pre-Adamite times, bibliography, etymology, advertisements with eulogistic extracts of reviews of the author's previous works, etc., etc.), would be reduced to a pamphlet of fair size, which could be read easily and profitably. Life is too short and works too many, for any one seeking for information on hemorrhoids, to read a 300-page book; it is like looking through a bushel of chaff for a grain of wheat.

To show how much a specialist can spin out a work of this kind, we might mention that eight pages are devoted to *Equitation*, considered as a cause, a preventive and cure of hemorrhoids; fifteen pages to the question, "Are Hemorrhoids Salutary?" thirty-three to Bibliography. The *Etymology and*

application of the term Hemorrhoids is discussed in eighteen pages.

The treatment of the disease is very fully dwelt on, nearly half the book being devoted to it. Speaking of the surgical treatment, the author prefers the ligature applied after a manner peculiar to himself, which he calls the *improved method.*

There is much of interest in the book and evidence of a great deal of research, but it is not the book for the busy man. Any one who has time to spare, and is fond of the curious and ancient, will find much information in this work. We might recommend it to young practitioners, waiting for a practice, who wish to improve their minds and at the same time learn something of a subject which is too much neglected in the ordinary college course.

Hay-fever, and its Successful Treatment by Superficial Organic Alteration of the Nasal Mucous Membrane.—By CHARLES E. SAJOUS, M.D., Instructor of Rhinology and Laryngology in the Post-graduate and Spring Course, Jefferson Medical College, etc., etc. Illustrated with thirteen wood engravings. Philadelphia: T. A. Davis, Atty.

In this essay, the view chiefly advocated by the author is that the affection called hay-fever arises from the combination of an unduly irritable state of the nerve-centres (perhaps hereditary) and an hyperæsthetic condition of certain of the nasal nerves due to local disease. When these two necessary elements exist, it only requires the addition of certain irritating substances in the atmosphere for a paroxysm of hay-fever to result. The argument then goes on to assert that removal of any one of these three necessary factors will eliminate the occurrence of the paroxysm. The only one capable of being definitely controlled is the state of the nasal mucous membrane. Dr. Sajous claims that these special hyperæsthetic areas are capable of demonstration, and proposes to destroy their sensitive condition by the application of the actual cautery. He claims to have had much success by the use of this remedy. Of

course it is not to be supposed that this is entirely original, as several independent observers in the United States have been working up the same subject, and have arrived to a certain extent at similar conclusions. The misery endured by the sufferers from this disease will lead them to gladly accept any means of relief. The treatment by cautery is not as painful as might be supposed (after cocaine, not at all), and will very probably be extensively employed.

A Text-Book of Medical Physics. For the Use of Students and Practitioners of Medicine.—By JOHN C. DRAPER, M.D., LL.D. With 377 illustrations. Philadelphia: Lea Brothers & Co., 1885.

Of all subjects which form the curriculum of studies for the matriculation in medicine, none are of more importance than physics. It is, therefore, a hopeful sign when we find a distinguished scientist willing and able to present to the practitioners of the future a work which, we feel assured, will be a great aid to them in the acquirement of this subject.

Dr. Draper, who is Professor of Chemistry and Physics in the Medical Department of the University of New York, is already well known to the medical world by numerous scientific contributions. This work is the substance of his lectures before the medical classes of the University of New York. Considering the fact that the students of this medical school are not required to furnish any evidences whatever of general education, it is fortunate that they are obliged to take at least a fairly full course on the relation of physics to medicine. It is not alone the salutary mental training obtained from snch a course that makes it of value. The utter impossibility of understanding many of the important facts in physiology and physical diagnosis without some knowledge of physics, is the great reason why it is of importance that every medical student should be well grounded in this branch.

Physics should be a subject in the medical student's preliminary training. In medical schools demanding four and five sessions no time is found for this subject, and how seriously,

then, must its consideration interfere with the clinical and other work where the whole course is included in three and often two short sessions.

When the day arrives when our enterprising "cousins" will replace their present "certificate of good moral character" for a stiff matriculation examination, including physics, there will be a decided advance made in their medical education.

Dr. Draper's work is a very large one. It is entirely too large. He easily could have said all that is essential for medical students to know on this subject in a work half the size of this portly volume. It contains much that has no relation whatever with physics. Why, for instance, should a work on medical physics be burdened with a crude and antiquated description of how to cut, stain and mount microscopic sections? We cannot understand why a description of micro-organisms should form a part of this work.

The section devoted to electro-therapeutics is far from what we naturally expected, and far from what it should be. What can be the meaning of recommending the constant current in "inflammation of spinal cord attended by hemiplegia," or in "inflammation of the cerebrum attended by tremors and convulsions?"

When the author says "the cathode is placed on the inflamed part and the anode near by," and "if there is water exudation the application is reversed," we fail to understand what he means.

In a table of the nervous supply of the principal muscles of the body, we find the statement that the radial nerve supplies the flexors of the thumb and hand.

No reference whatever is made to the galvanometers recently introduced into medical practice; neither is there any account of the modern methods of interrupting the continuous current.

We have pointed out a few of the blunders that disfigure this work. It contains, however, much that is good and well presented. This is especially true when its writer deals with such subjects as the general properties and composition of matter, acoustics, heat and light.

When the author is called upon to prepare a second edition

of his work, we would respectfully advise him to confine himself to medical physics, leaving histology to the histologists, bacteriology to the pathologists, and electro-therapeutics to the neurologists.

The work is well illustrated and printed, the publishers having performed their part in their usual creditable manner.

Malaria and Malarial Diseases.—By Geo. M. Sternberg, M.D., F.R.M.S., Major and Surgeon, United States Army; Member of the Biological Society of Washington, etc. New York: Wm. Wood & Co.

This volume, published some months ago in Wood's Library, contains a complete exposition of the present state of our knowledge on the subject of this widely-spread and important affection. The various theories which have been suggested to explain the complex phenomena associated with malarial poisoning are passed in review and the conclusion (as we might expect) arrived at that, though many are ingenious, none as yet is sufficiently complete to have been universally accepted. Beyond quinine and arsenic, the author's experience leads him to put no confidence in anti-malarial remedies, such as carbolic acid, iodine, potassium bromide, etc. The chapters upon the various forms of malarial disease are very full, and furnish copious descriptions of the varied symptomatology of aguish disorders.

The Oeleates; an Investigation into their Nature and Action.—By John V. Shoemaker, A.M., M.D., Lecturer on Dermatology at the Jefferson Medical College; Physician to the Philadelphia Hospital for Skin Diseases, etc. Philadelphia: F. A. Davis, Atty.

The use of the oleates of various bases has within the past few years become very general, and much satisfaction is commonly expressed at the results obtained. The introduction of these agents to the profession has been effected in this country to a considerable extent through the enthusiastic advocacy of this writer, who has urged their claims to attention in a number

of communications to various medical journals and before medical societies. The essence of these essays, together with some new matter, is contained in the present volume, from which can be gathered all essential matters concerning the various oleates which have proved serviceable and the cases in which they are specially indicated. All having to deal with cutaneous affections will do well to acquaint themselves with these valuable aids to treatment.

Transactions of the New York State Medical Association for the Year 1884. Vol. I.—Edited for the Association by AUSTIN FLINT, Jr., M.D. New York: D. Appleton & Co.

This is the first volume issued by the Association as reorganized after the split upon the Code question. It forms a large volume of 600 pages, and contains the presidential address, the addresses of the sectional presiding officers, and all the papers read in the various sections, with the discussions thereon. Many of these have already appeared in the weekly and other journals, but, for reference, the collection is a very valuable one, and includes many essays of merit in every important department of medicine and surgery. It is handsomely gotten up, in general appearance resembling the volumes of the "Gynæcological" Transactions.

What to Do in Cases of Poisoning.—By WILLIAM MURRELL, M.D., F.R.C.P., Lecturer on Materia Medica and Therapeutics at the Westminster Hospital. Fourth Edition. London: H. K. Lewis.

The best little pocket volume of its kind extant. It is so well known as to need no introduction. We are told that, for this edition, "alterations and additions have been made on almost every page." Not knowing at what moment its guidance may be suddenly called for, every one should keep it constantly within reach.

Books and Pamphlets Received.

A Text-book of Phyliology. By M. Foster, M.A., M.D., F.R.S. Third American from the fourth and revised English edition, with extensive notes and additions by Edward T. Reichert, M.D. Philadelphia: Lea Brothers & Co.

Comparative Anatomy and Physiology. By F. Jeffrey Bell, M.A. Philadelphia: Lea Brothers & Co.

Diseases of the Tongue. By Henry T. Butlin, F.R.C.S. Philadelphia: Lea Brothers & Co.

Cholera: its Origin, History, Causation, Symptoms. Lesions, Prevention and Treatment. By Alfred Stillé, M.D., LL.D. Philadelphia: Lea Bros. & Co.

The Anatomy of the Intestinal Canal and Peritoneum in Man. By Frederick Treves, F.R.C.S. London: H. K. Lewis.

A Handbook of Pathological Anatomy and Histology. By Francis Delafield, M.D., and T. M. Prudden, M.D. New York: Wm. Wood & Co.

The Technology of Bacteria Investigation. Explicit Directions for the Study of Bacteria. By Chas. S. Dolley, M.D. Boston: T. E. Cassino & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, May 29th, 1885.

T. J. Alloway, M.D., 1st Vice-President, in the Chair.

Dr. R. J. B. Howard exhibited the following pathological specimens:

Atheroma of Aorta—Infarct in Spleen—Granular Kidneys.—The heart showed a moderate degree of calcification of the aortic valves, normal in other respects. Aorta showed very advanced atheroma, there being all degrees from slight yellowish sub-intimal deposit to extensive calcification of the inner and middle coats; also many spots where the intima had been destroyed, laying bare the middle coat, which was calcified. In one place two of these "atheromatous ulcers" communicated by a passage running under the intima, admitting a pencil. The spleen had a large infarct raising the capsule, marked off from the surrounding tissue by a dense, yellow, fibrinous capsule. The substance of the infarct was of a dull reddish brown color, soft and friable, apparently structureless, and looking like a decomposing blood clot. The kidneys were a little smaller than normal. Cortex shrunken, surface typically granular, surface tough on section.

The patient had a spot of softening in the pons. This specimen was in Dr. Wilkins' possession. The condition of the aorta, etc., was not suspected during life.

Dr. Wilkins said this patient, aged about 73, came to hospital with paresis of the left side, contracted pupils and mental derangement. The muscles of the thumb of the left hand were wasted, the right less so. Five or six days before death, left-sided hemiplegia set in, which could not be accounted for at the time, but which the *post-mortem* made clear. He sliced the brain, getting nothing abnormal till the pons was reached. Here, to the left of the median line, was found a spot of softening the size of a pea, due, no doubt, to a piece of fibrin from the aorta or a little plate becoming separated and carried till lodged there.

Malignant Disease of the Uterus.—Dr. Howard exhibited this for Dr. Armstrong. The cervix was gone ; all the remaining tissues were involved, as were also the parts about the bladder. Both ureters were enormously dilated, from being blocked at the lower end. The pelves also were greatly distended. There were no signs of peritonitis.

Dr. Armstrong said he saw the patient first in the beginning of January. Was sent for on account of excessive metrorrhagia. The case was easily diagnosed, and the chloride of zinc paste applied. A slough formed and came away. She got about till April 1st, when he was again sent for to stop another hemorrhage. The paste was again applied. He was sent for a third time for this trouble last Wednesday, but on arriving she was dead. A late symptom was incontinence of urine from the infiltration about the neck of the bladder and urethra. For the last five or six days no urine came away. She never suffered much. The patient's sister had just recently died of the same disease.

Dr. McConnell then read a paper on " Cholera and the Comma Bacillus." After introducing the subject, he stated that all epidemics of cholera have their origin in the region about the delta of the Ganges, in India ; and the course pursued by those which have reached this country has usually been

northwestward through Afghanistan and Persia, over the Caucasus, or along the Caspian to Russia; thence through Northern Europe to England and across the Atlantic. The epidemic which threatens us this year is taking a shorter route. It left its seat about 1880, prevailed in Arabia in 1881 and 1882, ravaged Egypt in 1883 and France in 1884,—and this year it is epidemic in Spain, and should England be visited the probability of its being conveyed to this country will be great. The natural history, character, etc., of the bacteriaceæ were then briefly sketched. Bacteria were first discovered in 1683 by Leewenhock, a Dutch microscopist, but the knowledge we now possess has been gained chiefly by investigations made during the last twenty years. The names of those prominent in this field of science were then given. Bacteria had been discovered associated with the following affections, and have, in some, been satisfactorily demonstrated as being the cause:—Anthrax, septicæmia, pyæmia, osteo-myelitis, malignant œdema, erysipelas, glanders, relapsing fever, typhoid fever, variola, cow-pox and sheep-pox, measles, diphtheria, malarial fevers, syphilis, gonorrhœa, endocarditis, croupous pneumonia, pertussis, trachoma, pterygium, tuberculosis and some others,—and recently Pasteur has discovered a micro-organism in hydrophobia, and by attenuating the germs and inoculating dogs with them has rendered the latter insusceptible to the influence of the most potent rabid virus. Reference was then made to the work of those who had during the past forty years made search for the cholera germ, and the arguments in favor of the germ theory of this and other infectious diseases were given. The work of Dr. Koch was then referred to in detail. The character of the comma bacilli, their peculiarities of development and the influence of drugs upon them given, and their occurring only in the intestinal canal, and contents mentioned. The experiments of Drs. Reitsch and Nicati, who successfully inoculated animals with the comma bacillus, was subsequently confirmed by Dr. Koch. The fact that Drs. Finkler and Prior of Bonn, and Drs. Klein and Gibbes of London, found comma-shaped bacilli in sporadic cholera and dysentery, and that they

were found in stale cheese by Deneke and in the saliva by Muhler and Lewis, was met by Dr. Koch and his followers by insisting that morphological criteria alone are not sufficient to show that the bacilli are identical. Their physiological characters must be similar; under cultivation the mode of vegetation and the colonies, etc., of the above are quite different from the cholera bacillus, hence they are distinct species. The bacillus said to have been found in the blood by MM. Strauss and Roux, Dr. Koch pointed out, were the "blood plates" often found in some febrile diseases. He (Dr. McC.) thought the report of Drs. Klein and Gibbes, of the English Cholera Commission, rather confirmed Koch's discovery than otherwise. They found the comma bacillus in all cases, but looked upon others as *post-mortem* occurrences. They also found straight bacilli, but Mr. Watson Cheyne, in the discussion which followed their report to the Royal Medical and Chirurgical Society, stated that they were at one time straight, then curved and sometimes spiral, but whatever its morphological change is, it invariably exhibits the same actions and characters under cultivation. The detection and cultivation of the comma bacillus would enable us to recognize the earliest cases of cholera or an incipient epidemic. In regard to treatment, the fact that the bacilli do not develope in acid media or below 60° F. would support the advocates of acids and cold as treatment, although opium must still be the sheet-anchor. As the bacilli are destroyed by drying, dry heat would form the best disinfectant. The inoculations by Dr. Ferran in Spain were then referred to. He (Dr. McC.) said, as the bacilli had been found in the intestines only, not in the blood, and one attack of cholera did not usually protect from subsequent ones, it would be interesting to learn the method adopted and what measure of protection is afforded.

Dr. Wilkins said that five or six weeks ago Prof. Billings brought him a test-tube containing the Asiatic cholera germs in a beef-tea and gelatine solution, also one with the cholera morbus germs. From the shaking they received both were liquified, so that their peculiar and very different behaviours

could not be observed. The cholera morbus preparation was very fœtid, the other much less so.

Dr. Kennedy suggested that, as the men about copper works were known to be rarely attacked with cholera, the salts of copper should be tried as a remedy.

Dr. Hy. Howard had seen three epidemics—one in Ireland and two in Canada. Each epidemic appeared to be less severe than the previous one. The salts of copper had been used in all these epidemics, but were not found of more benefit than other astringents.

Dr. A. L. Smith asked if during the last epidemic in this city the water reservoir was then at the head of Elizabeth street, and was the water pumped up to it from the river opposite to the city.

Dr. Kennedy said it was.

Dr. Hy. Howard said that 42 years ago the reservoir was a large wooden vat at the corner of Notre Dame and Bonsecours streets, the water being pumped into this from the long wharf. It was supplied by wooden pipes. There were then no water-closets in the houses.

Dr. Trenholme said that if cholera came, he intended giving his patients large quantities of water along with spirits and camphor.

Dr. R. J. B. Howard said he had recently heard a discussion as to its treatment in London. Application of hot water to the back and abdomen, and hot alcoholic drinks with diluted sulphuric acid were strongly recommended. Enemata of carbolic acid, corrosive sublimate and nitrate of silver were said also to be of great service.

Dr. Reed said that more than likely it was the acid fumes about copper works which preserved the workmen from attacks of cholera.

Stated Meeting, June 12th, 1885.

E. H. Trenholme, M.D., 2nd Vice-President, in the Chair.

Cancer of Rectum with Secondary Affection of Stomach.—Dr. R. J. B. Howard exhibited the stomach and intestines of a

patient who had recently died at the Montreal General Hospital. The history of the case is as follows: James W., aged 63, had for some time had pain referred to bladder, and was sent into the hospital under Dr. Fenwick, on suspicion of having stone in the bladder. In December, 1884, he began to suffer pain over pubes, slight and limited in area, increased on lying down. This pain increased steadily in intensity, and in April last patient gave up work on this account. At this time there was frequent micturition, both day and night, but urine presented nothing unusual. He now began to lose flesh rapidly. Some three weeks before admission he had some retching, and on three occasions vomited. On admission into the hospital June 2, '85, the above symptoms were present. It was found that the stream during micturition was sometimes arrested, and that the act was attended by pain. No stone was detected in the bladder, and as the urine contained some pus, and his prostate was enlarged, he was put on treatment for cystitis. Nothing was discovered when examining prostate per rectum, except the enlargement of that gland. Two days later he had an alarming attack of collapse, and recovering from this, symptoms of pneumonia appeared, of which disease he died on June 9th. Before this a hard tumor was detected in the epigastrium, which was believed to be malignant disease of the pylorus, or possibly the liver. The man was much emaciated, and had a very cachectic appearance.

Necropsy.—Pneumonia of left lung and œdema. In abdomen all the glands in omentum were enlarged, some the size of a walnut, hard and firm. The gastro-colic omentum was puckered up and contained a large nodular mass. Ascending colon bent on itself, and held down by a large mass of new growth, which appeared to originate in the glands of the meso-colon. Sigmoid flexure turned up and fixed to transverse colon by another nodule of cancerous tissue, and lower down, opposite the third lumbar vertebra, adhered to a large mass formed between the layers of the mesentery. The abdominal viscera were removed *en masse*, and on further dissection an ulcerated surface the size of a man's

* Since this report, a microscopic examination of the primary nodule shows this to have been of the nature of true scirrhus and not epithelioma.

palm was found occupying the posterior aspect of the lesser curvature of the stomach, and its wall was slightly infiltrated; the pancreas was also involved in this growth. In several other places the walls of the bowel were the seat of similar new growths, usually attacking them from without, and starting from between the layers of the mesentery. All the mesenteric and retro-peritoneal glands were enlarged, firm, and evidently the seat of the same new growth. On the anterior wall of the rectum, corresponding to a mass the size of a bantam's egg, seated in wall of rectum and adherent to the bladder just above the prostate was an ulcer the size of a ten-cent piece, having raised, rolled ridges, and a somewhat depressed base. The ulcer was about four inches from anus, and no enlarged glands were found below this. Veins of prostatic plexus filled with old clot. Arteries normal. Bladder normal, with exception of enlarged prostate.

Dr. R. J. B. H. remarked that this was another of those cases where there was extensive disease of the stomach without symptoms. The original disease, without doubt, commenced in the rectum, and extended upwards to the stomach through the glands. He also said that it is most unusual for malignant disease of the rectum to spread so rapidly, and from so slight a local affection to become general carcinoma. The symptoms caused by moderate enlargement of the prostate were more prominent than those caused by the extensive malignant disease.

Case of Tetany.—Dr. Stewart read a paper on this case and exhibited the patient. (*See page* 27.)

In the discussion which followed the reading of the paper,

Dr. Geo. Ross said he would like to ask Dr. Stewart the mode of death in the fatal cases he had seen. The disease is such a rare one in this country that he had seen but few cases.

Dr. Henry Howard, after alluding to the various disorders of the nervous system allied to tetany, said that in his opinion a more complete anatomical and physiological knowledge of the nervous system is necessary before the exact cause of these cases can be positively known; but he thought that some irritation or inflammation of the vaso-motor nervous system may account for this disease. He had strong hopes that in the near future, with

the many workers and varied means of research, the cause of diseases such as cancer, tetany, etc., will be found, and when recognized early, that they may be successfully treated.

Dr. Godfrey had seen several cases of tetany, or a disease like it, during the last fifteen years.

Dr. Shepherd asked why it is that tetany is so much more common on the continent of Europe than in America or England, epidemics of the disease being unknown in either place, and whether tetany is more common in the dark races, as is tetanus.

Dr. R. J. B. Howard said it was remarkable that two such different diseases as myxœdema and tetany should occur so commonly after extirpation of the thyroid gland. They occur in animals as well as man. He suggested that, where possible, the isthmus only of the thyroid should be removed, as in the 150 experiments of removal of the isthmus, performed on animals by Victor Horsley, none suffered from tetany.

Dr. Wilkins said that although he had never had a case of tetany, he was much interested in the disease, and thought it probably due to irritation of the peripheral nerves, as these cases always follow diarrhœa, removal of the thyroid, or some other lesion.

Dr. Stewart, in reply, said that in the fatal cases he had seen there was spastic contraction of the respiratory muscles and bronchitis. He could not tell the reason of the frequency of the disease in Europe; of course, removal of the thyroid is a very common operation there, and this would account for some of the cases, but not the epidemic form. He had seen 60 to 70 cases in the General Hospital at Vienna at one time. So frequently did this disease follow extirpation of the thyroid, that Billroth had given up operating for bronchocele, except in cases where the tumors endangered life. He was not aware of the disease being known in the West Indies, or that it is more frequent in the negro race. As to the theories advanced to explain its nature, he thought that advanced by Weiss of Vienna the most probable. Weiss looks upon the origin of the trouble as due to irritation of the sympathetic, waves of dilatation and contraction being alternately set up.

Ureometry.—Dr. Reed showed Doremus' ureometer, and illustrated the method of using it. This apparatus is very simple, consisting of one piece only—a bent tube of glass, one arm of which is graduated to represent grains per ounce of urea. The peculiarity of the instrument lies in the fact that a measured quantity of the urine to be tested is projected, by means of a nipple pipette, beyond the bend of the tube, previously filled with the usual hypobromite solution. Dr. Reed had tested it with a solution of pure urea, and found the readings correct. The price of the instrument is two dollars, and of each test under three cents. Specific gravity beads, as supplied by Parke, Davis & Co., for estimating the density of urine, were also shown and recommended, as being more convenient, simple and portable than the usual urinometers.

Buckwheat Flour in Diabetes.—Dr. A. M. Duncan, of Hamler, Ohio, writes that Dr. Alvord, a retired practitioner of that place, who is a sufferer from glycosuria, finds more relief from a diet of pure buckwheat flour cakes than from anything else. While he adheres to this food the urine becomes nearly normal in quantity and quality, there is no gastric distress, and the pain in the eyes—nearly destroyed by chronic iritis—is markedly relieved. On resuming the use of wheat bread and other starchy foods the symptoms become aggravated, to be again relieved upon a return to buckwheat.—*Medical Record.*

Cocaine in Chronic Pharyngitis.—Dr. Jahn recommends the following formula for the relief of the cough and vomiting of chronic pharyngitis;

℞.—Cocaine	. . . . .	gr. iss.
Glycerine	. . . . .	f℥ iv.
Aquæ distillatæ	. . . .	f℥ x ℥ ij.
Acidi carbolici	. . . .	gr. ⅛.—M.

S.—Apply morning and evening with a suitable brush.—*Gazette Médicale de Paris*, March 14, 1885.

CANADA

Medical and Surgical Journal.

MONTREAL, AUG., 1885.

THE NORTH-WEST CAMPAIGN.

The Riel Rebellion being over, the camps broken up, and the troops having returned to their homes, we may glance at a few of the features of the campaign of interest from a medical standpoint. When the call came in March to send volunteers to Qu'Appelle and west and north of this locality, it was fully expected by all not acquainted with the country that the casualties from sickness would be great. The majority of these men, it was said, are from the cities: they follow principally sedentary occupations: they are accustomed to be well fed and well housed, and are not inured to fatigue and loss of rest. On the march they will probably be ill fed, will sleep upon the ground, will undergo much fatigue and often be obliged to forego many of the accustomed hours of rest. The result will surely be disastrous, and many will be prostrated by sickness. These anticipations, however, did not prove to be correct. Considering that there were between 4,000 and 5,000 men actively engaged in the field, the number who were at any time off duty from sickness was extremely small, not more indeed than might have been looked for amongst any similar number of persons surrounded with the ordinary comforts of civilized life. The only serious cases were a few attacks of pneumonia (some unfortunately fatal) and a few of acute rheumatism, none of which were severe, and all quickly recovered from. Of affections of the digestive system (diarhœa, dysentery, and the like) there was an entire absence; all which is the more remarkable when we consider that, for a long time, the meat ration con-

sisted entirely of canned corned beef, and that the bread was of a very inferior quality. It need hardly be said to any of our Canadian readers that malaria and its effects do not exist in that country. Typhoid fever was not observed, but at some of the camps a peculiar form of febrile attack (irregularly intermitting in character) has been described by the medical officers; but the cases were few, and quickly convalesced without much treatment. With these exceptions the health of the men appears to have been excellent, and, more than this, it was a matter of common remark that young striplings were seen to rapidly improve, and gain weight and strength under the invigorating influence of the air of the prairies. The tonic and strengthening properties of a residence in this north-western country has long been commented upon by those familiar with the districts in question, and certainly the remarkable immunity from illness of all kinds enjoyed by our soldiers, even when suffering from the adverse influences inseparable from hurried marches in an ill-equipped condition, tends fully to confirm their observations.

With reference to the rations served to the men, and especially to General Middleton's column, as already stated, for weeks together canned corn beef from Chicago formed the staple article. Any one acquainted with this food will tell you that a man with a good stomach can devour it without special objection for a few days, but that after this it becomes very distasteful, and finally he loathes and abhors it, and cannot be induced to swallow it till driven by the pangs of gnawing hunger. It is self-evident that fresh meat should be provided whenever this is possible, and it is a point on which the chief medical officers should insist in every case, except it be absolutely impracticable to procure it. There has probably been more grumbling over the canned beef than over any other matter connected with the whole conduct of the war. Why were not cattle for supplies driven behind the column, to be slaughtered as occasion required? This means of rationing the troops was suggested before they even left Qu'Appelle, but the suggestion was not approved of.

As regards the medical department generally, we need only

say that all reports which have reached us go to show that this branch of the service proved itself as fairly efficient as any other, and quite as much so as was compatible with the hurried manner in which surgeons were despatched on the service. Those of our militia surgeons who found themselves with the battalions which were engaged in the various fights proved themselves fearless of danger in the performance of their duties, untiring in their attention to the wounded and skilful in their management of the casualties of the battlefield. The hospital staff did excellent service. Although ten days only was allowed for the work, yet after the fight at Batoche there was ready at Saskatoon a hospital of more than 75 beds to receive all the wounded sent there. The patients had excellent wooden cots, abundance of bedding, etc., and were well supplied with food of the best quality, the surrounding farmers bringing in eggs, milk, potatoes, etc., daily. The whole was under the personal supervision of the Deputy Surgeon-General, ably assisted by leading members of the hospital staff. A sufficient supply of dressers and skilled nurses was always on hand. All modern surgical appliances and requirements for the careful and antiseptic dressing of wounds was within reach, and competent authorities have expressed themselves surprised at finding such completeness of detail and care in management in such a distant spot. Dr. Boyd, for instance, who came in charge of the English medical fund, has spoken very highly on these points and on the general management of the Medical Department as he saw it during his recent visit. The transport of the wounded by boat from Saskatoon to Winnipeg was also skilfully planned and successfully carried out.

Credit is due to Dr. Bergin, the Surgeon-General, and to Dr. Roddick, Deputy Surgeon-General and chief medical officer in the field, as well as to the Hon. Dr. Sullivan, Purveyor-General to the Medical Department, for the satisfaction which the management of the department has so generally given.

We hope, at an early date, to be able to give some further details concerning the nature and treatment of some of the more interesting cases.

THE TREATMENT OF ALBUMINURIA.

The treatment of albuminuria *per se* is seldom attempted by physicians. How different is the case with other prominent symptoms, as dropsy, anæmia, or jaundice. Here it is the rule to treat the symptom and not the cause of it, while in albuminuria the contrary is the practice—we treat the cause and not the effect. The principal reason for these differences in practice is the fact that the former are marked subjective conditions which arrest the attention of the patient and his friends, while the latter being entirely objective, we are not urged to interfere. In jaundice, dropsy and anæmia, we are very frequently unable to discover the cause. In albuminuria, on the other hand, the diagnosis of the seat and nature of the cause is not difficult to make out. In the former, therefore, we are frequently compelled, for want of definite knowledge, to treat symptomatically, while in the latter we direct our measures to the removal (when possible) of the original lesion.

In albuminuria depending on retardation of the venous return from the kidneys, the removal of the obstruction to the circulation is quickly followed by the disappearance of the albuminuria. As the most common cause of this form of loss of albumen is cardiac failure, digitalis is therefore our best agent to employ for its removal.

Pyrexial albuminuria requires no treatment, as it disappears after the temperature has become normal. The albuminuria of anæmia, and that form due to neurotic disorders, also quickly disappears on the removal of the cause.

In the albuminuria due to disease of the kidney, this symptom becomes only of marked importance when it is the only one present for a long period, indicating the nature of the lesion with which we have to do.

Some physicians look upon the actual loss of albumen as serious when long continued in cases of chronic nephritis. They consider it a great drain on the system. Senator has lately pointed out that this loss, at most, cannot exceed half an ounce in the twenty-four hours. He shows that in cases of chronic catarrh of the bladder more than this quantity of albumen is

daily lost for many months, and yet nobody thinks the loss a dangerous one or takes any means to directly diminish it. Senator says the presence of albumen in the urine in any of the different forms of chronic nephritis is no reason for feeding patients with substances rich in albuminous ingredients. In his experience, the use of such diet increases the albumen in the urine, and greatly adds to the dangers of uræmic intoxication.

There is great significance in the experience obtained by Bruce and Sparks in the treatment of a phthisical patient who was also suffering from chronic albuminuria. They fed him largely on eggs, without any marked change in the quantity of albumen excreted ; but shortly after confining him to strictly vegetable diets, the albumen entirely disappeared from the urine.

Penzoldt has found that on feeding a dog who had chronic albuminuria with a meat diet, there was marked increase in the amount of albumen when compared with that eliminated when the animal was under a bread diet.

It follows from the above observations that when we are treating albuminuria as a symptom, we should diminish, as much as possible, diet rich in albuminous materials. Milk diet, carbohydrates, fatty and gelatinous substances should be chiefly relied on. Next in importance to diet in the treatment of albuminuria is the subject of muscular rest. It is a well-established fact that violent exercise is sufficient to bring on albuminuria. It is a clinical fact also that patients with chronic albuminuria excrete more albumen after active exercise than they do while at rest. The avoidance of cold baths and mental inquietude are also important points to be taken into consideration.

The above treatment is, of course, only indicated where the loss of albumen is the chief symptom of the nephritic changes. We have no medicinal agent which has a direct influence in lessening the amount of albumen filtrated through the kidneys. The alleged power of tannin containing substances to do this has not been proved. To sum up the treatment of albuminuria, there are four important points to attend to : 1st, A diminution in the amount of albumen ingested. 2nd, Rest in bed. 3rd, The avoidance of cold and cold baths. 4th, Mental quiet.

THE SMALLPOX.—There has been very considerable increase in the number of smallpox cases during the past month. In view of the threatening epidemic, the following figures may be of interest as showing the comparative immunity of the vaccinated classes of the community :—

MORTALITY FROM SMALLPOX IN THE CITY OF MONTREAL.

	Total Mortality.	*French-Canadians.*
1876	703	568
1877	506	431
1878	728	639
1879	472	417
1880	140	111
1881	5	4
1885 (From April to 15th July, inclusive).	44	35

The following is a report of the cases treated in the smallpox hospital from 7th April to 15th July, 1885 :—

Number of patients admitted	85
" " French-Canadians	57
" " deaths	28

CANADA MEDICAL ASSOCIATION.—We are greatly pleased to learn that there is every prospect of there being a highly successful meeting of this association at Chatham. Already the number and character of the papers promised completely ensures the scientific success of this important gathering. The well known energy and abilities of the profession in Chatham is a sufficient guarantee that no stone will be left unturned by them to make the meeting a general success. All regular members of the profession will, on application to Dr. Stewart, the General Secretary, be furnished with certificates entitling them to travel for a fare and a third. All the railway companies now require that members should purchase full fare tickets while travelling to the place of meeting, and for the return trip they will, at the place of meeting, be furnished with a ticket at one-third fare. The return trip must be made by the same route as travelled when going to the meeting. We would again remind our readers that the Association meets in Chatham on Wednesday and Thursday, the 2nd and 3rd of September.

Obituary.—We regret to announce the death of Alfred Jackson, M.D., of Quebec, on the 15th ult. Dr. Jackson was one of the oldest and most respected practitioners in Quebec. He was for many years Dean of the Medical Faculty of Laval University, and had attained the age of 75 years.

The New Building.—The building of the Medical Faculty of McGill University is making rapid progress. The walls and roof of the new lecture-room and the section adjoining it are complete, and the internal work is being quickly pushed forward. The remodelled dissecting-room is nearly finished, is splendidly lighted and will furnish vastly increased accommodation. It is confidently expected that all the alterations will be completed during next month.

The Insane in the United States and Canada.—We learn that Dr. D. Hack Tuke is preparing for publication a book bearing the above title, which will appear in about a month. It will contain, besides the complete papers on the subject compiled during his visit to this country last year, an interesting account of early lunacy practice in the United States and a description of the development of the study of mental diseases in the Union. We feel sure that many—both lay and medical—will look with interest for a book from this well-known writer, for all will remember the awakening that followed his powerful exposition of the glaring faults of the antiquated system followed in this province. When in receipt of the volume we shall be glad to draw attention to its contents more at length.

—The recent meeting of the American Ophthalmological Association, held in the Pequot House, New London, Conn., was perhaps the most successful in the annals of the Association both in the matter of numerical attendance and in the number and quality of the papers presented. Upwards of forty members took part in the proceedings, and papers were read and discussed embracing nearly the entire range of ophthalmology. Before adjourning, the meeting showed in an emphatic manner the feeling of its members towards the new committee of the pro-

posed International Medical Congress by passing a resolution almost unanimously advising all members of the American Ophthalmological Association not to act with the new committee.

Personal.

At the July examination of the College of Physicians in Ireland, Dr. R. H. Arthur (McGill, '85) obtained the licenses of the College in both medicine and midwifery.

Dr. Bell has been relieved from hospital duties, and is at present on a visit to the Waldron Ranche, near the Rocky Mountains.

Dr. Palmer Howard has returned from a month's vacation, part of which was spent on the salmon rivers. The Doctor proved himself as apt at throwing a fly as at making a diagnosis.

Prof. Osler is, we believe, at present in Toronto, and will, after spending some weeks in Ontario, attend the annual meeting of the Canada Medical Association, of which he is President-elect.

Dr. Roddick, Deputy Surgeon-General, has returned from the North-West, having provided for the remaining wounded in the General Hospital at Winnipeg. His health is much improved by the campaign, and he speaks highly of the country.

Dr. Boyd, who came from England in charge of the fund colleted for the Medical Department by the Princess Louise, passed through here on the 1st instant on his way home. He was much gratified by what he saw, and speaks in the highest terms of the care which he found bestowed upon the wounded and the comforts with which they were surrounded. The fund was found of great service in assisting many who had suffered severe losses, and furnishing them with the means of securing some extra conveniences and appliances.

Medical Items.

Small-pox or Chicken-pox.—The authorities of Long Island City, it is said, are likely to have a suit for damages to defend. It is alleged that they ordered the removal of a man who seemed to have small-pox to the hospital on North Brother Island, where it was discovered that he was only suffering from chicken-pox. He was kept in the hospital eleven days.

The Most Popular Medicines.—Last month we published a table compiled by an American writer showing the comparative proportion in which twelve of the leading medicines had been ordered in 1,000 prescriptions which had been taken at random. It was shown that quinine was ordered 238 times, opium 136, nux vomica 130, iron 123, while iodine, mercury, bismuth and bromine are altogether at 59 and 60 times. In June 1868, we published an article by Mr. W. Willmott on "Medicine," in which a somewhat similar investigation is recorded. Mr. Willmott had analysed 1,000 prescriptions, but he did not give the details in a form which admits of exact comparison. He, however, found that quinine was far ahead of any other single medicine ordered, but, classifying all remedies in their natural groups, he found mercury prominently at the top, then potash, bark, opium and iron. He found that out of the 768 simple and compound medicaments of the Pharmacopœia, only 485 occurred at all in these 1,000 prescriptions, while three-fourths of these were not prescribed 10 times in the 1,000. —*Chemist and Druggist.*

Daniel's Medical Journal.—If progress in medicine in the United States is to be estimated by the number of new medical journals springing up there almost daily, then indeed have our neighbors reason to be proud. The latest bantling is that bearing the above title, and it hails from Austin, Texas. Now Texas was one of the territories left out in the cold by the original committee, having no representation on the staff of the International Congress; and Texas couldn't stand this, and, asserting her rights at the New Orleans meeting of the Ameri-

can Medical Association, assisted in turning things topsy-turvey. A Daniel seems "come to judgment," and he belabors those who overlooked the claims of his section in what we suppose is right good Texan style. He modestly quotes the opinion of one of his friends who considers him the coming "Mephistopheles of Medical Jonrnalism." The magazine is not very diabolical in outward garb, but, of a deep red color, bears the symbolical star of Texas, shedding rays of light in all directions, whilst some juvenile winged spirits dance about, as though expressing their delight at its appearance. We shall be glad to greet Mephistopheles every month, and to hear how things seem to his Satanic mind.

Peptonized Cod Liver Oil Milk.—Dr. Wm. McGeachy, of Iona, Ont., states that he has used this preparation with very good results in the following cases, viz. :—1. Strumous enlargement of the glands of the neck. 2. Post-nasal catarrh, with chronic tonsillitis. 3. The sequelæ of acute diseases. As a remedy for the latter stages and subsequent results of whooping-cough in children, he considers that it excels all remedies previously tried, and that in the second class of cases mentioned it acted particularly well. It being so highly peptonized, it also acted as a good digestive agent.

—Experience, the greatest of all teachers, has demonstrated that, in a large number of cases, Cod Liver Oil is beneficial for a few weeks, that the patient improves upon it, gains flesh and strength, but, unfortunately, this improvement does not continue ; right in the midst of flattering prospects the patient comes to a halt, ceases to gain weight, or otherwise improve. Physicians have experimented for years in their endeavor to overcome this objection ; it has finally been accomplished by Drs. G. Overend Drewry and F. C. Bartlett of London, England, who, by means of pancreatine, have succeeded in perfectly digesting or hydrating the oil, thus giving to the profession cod liver oil in a perfectly assimilable form, overcoming the only objection to its continued use. This hydrated oil is christened Hydroleine, and after nearly five years of extended trial it has been extensively approved of.

CANADA

MEDICAL & SURGICAL JOURNAL

SEPTEMBER, 1885.

Original Communications.

MELANOTIC FIBRO-SARCOMA OF ORBIT REMOVED TEN YEARS AFTER ENUCLEATION OF THE EYEBALL CONTAINING A PIGMENTED GROWTH.*

By F. BULLER, M.D., M.R.C.S., Eng.,
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On the 27th day of May of the current year Mrs. X., aged 48, came to me for advice on account of a painful affection of the right orbit, which for a number of years had been causing her a great deal of discomfort and annoyance. The history of the case, as given in a communication from her medical attendant, is as follows :—

" About the year 1863 or 1864 Mrs. X. accidentally noticed " she was minus the sight of the right eye. The pupil was " dilated, but did not present the appearance seen in fungus " hæmatodes or encephaloid of the eye. At this time the optic " nerve must have been affected. On ophthalmoscopic exami- " nation I discovered no disease of notice.

" About the year 1865 she suffered from severe pains in the " region of this eyeball, which would shoot and extend from the " occiput of the same side to the eye, or from the eye to the " occiput. About the year 1868 she suffered from an exceed- " ingly severe attack of inflammation of the nervous apparatus,

* Read before the American Opthalmological Society at New London, Conn., July 15, 1885.

" eyeball and eyelids, and there were recurring attacks of " inflammatory and neuralgic conditions of the lids, eye, etc., " till about the year 1872 or 1873, when the other eye began " to be affected as I thought through sympathy. This sympa- " thetic affection continued with remissions and exacerbations " until it was evident the left eye, too, would be totally des- " troyed. I therefore advised the removal of the right eye, " which during all this time was giving her a great deal of " pain. She finally consented to the operation, which was " done by the late Dr. Robertson, of Albany, in 1874.

" On cutting into the eyeball, after its removal, the vitreous " humor was quite dense, not like cartilage and not solid ; it " was dark,—if I rightly remember it was black—and contained " several speculæ of bone, some of which were sharp-pointed. " I preserved for a long time one of these bones, which was " one-quarter inch or more in length ; and this reminds me that " for a year or two she had complained of a pricking sensation " in the eyeball, caused, no doubt, by these sharp points.

" She made a good recovery from the operation, and the " sympathetic trouble in the other eye subsided.

" After two or three years the same pains and recurring " inflammatory affections of the tissues of the lids and orbit " reappeared, and have persisted more or less ever since. " Three or four years ago the orbit began to fill up. Two " years ago next autumn it was about filled ; she then had an " exceedingly severe time, with pain and inflammation of the " surrounding tissues in close proximity to the orbit. The " swelling in the orbit burst, and then subsided very much, but " in a few months began to increase again."

The remainder of the communication, dealing with the family history of the patient, contained nothing of importance. In some points the patient's own statements differ materially from those of her physician. She states that about a year after the loss of vision was first noticed the eye swelled up and burst, and then shrank ; for some time afterwards she wore an artificial eye, but had to abandon its use owing to the discomfort it caused. That pain in the orbit and head returned within a

year after the removal of the diseased eye, and were usually most troublesome during the early part of the night, though sometimes she could hardly get any sleep all night long on this account. Often, after suffering for some hours, sudden relief would occur with a copious flow of tears from the conjunctival sac; that the inflammatory swelling which occurred two years ago subsided without any discharge other than a watery fluid.

In the absence of a minute examination of the diseased eyeball after its removal, the nature of the case cannot, of course, be positively asserted, though there is strong reason to believe the eyeball was filled with a pigmented sarcomatous growth at the time of its removal ten years ago.

The left eye is entirely normal, and shows no trace of sympathetic trouble.

Mrs. X. does not appear to have suffered in her general health, and presents no sign of functional or organic disorder other than that within the orbit.

The eyelids on the affected side are slightly swollen and darker than on the other side, and there is some lachrymation from the empty conjunctival sac, but the conjunctiva is perfectly healthy. *Only in the centre of the sac there is a small area of a darker color than elsewhere, traversed by a few dark, tortuous veins.* Here, too, the conjunctiva rests upon a firm mass, which is not subject to even a trace of muscular movement.

The orbit is in fact two-thirds filled by a firm, somewhat nodular mass, not adherent to its walls at the periphery, but not moveable to any extent. Pressure on the mass from below upwards causes pain, but not from above downwards. There is nowhere the least suspicion of fluctuation. Without forming a positive opinion as to the nature of the growth, though the dark patch over its central position was strongly suggestive of its pigmented character, I advised its removal with a view of relieving the almost constant pain caused apparently by its presence. To this the patient readily consented. The tumor was removed June 3rd. In order to have plenty of room I divided the outer canthus, then dissected back the healthy con-

junctiva ; with curved scissors and the fingers I removed first an isolated ovoid mass, of a dark color, enclosed in a delicate capsule and having a somewhat lobulated surface ; this mass—$2\frac{1}{2}$ cm. in length, 2 cm. wide and 1 cm. in thickness—was quite firm in texture. After its removal, the apex of the orbit was found to be occupied by a considerable quantity of softer material, which was cleared out with the curved scissors as completely as possible, and when the moderate bleeding had ceased chloride of zinc paste applied to the deep portion of the orbit in the usual way. The patient made a satisfactory recovery and returned home at the end of a week. As yet (July 15) there is no return of the growth, though, of course, too soon to expect any such result; but she remains free from pain, and in so far success has been achieved by the operation.

The ovoid mass first removed showed on section a mottled appearance, being divided into lobules of a dark color and irregular as to size and shape by broad bands of pale, fibrous tissue. The central portion of the lobules was made up almost entirely of cellular elements, but even here in thin sections, logwood staining brought out a delicate linear meshwork of white fibrous tissue, so arranged as to give the cells the appearance of being placed in rows in its long meshes.

In parts the cells were nearly all crowded with granules of a golden brown or black pigment, which for the most part was uniformly distributed in the cell plasma ; very few had more than one nucleus, which was always remarkably distinct. In certain localities pigmented and non-pigmented cells were present in about equal proportion, and in others none were pigmented.

Throughout the growth the prevailing character of the cells was spindle-shaped with long processes, or oat-shaped, though round cells were not wanting in any of the cellular parts, and in places were in excess of the others. Multipolor cells were extremely rare, though not entirely wanting.

As a general thing the non-pigmented cells were smaller than the pigmented, though otherwise precisely similar in character and arrangement.

The pale portions of the tumor consisted almost exclusively of white fibrous tissue, the same is true of its capsular envelope; yellow elastic fibres were also present in the peripheral parts of the fibrous intersections of the growth. The tumor was by no means a very vascular one, though traversed by a network of delicate capillaries. The larger blood vessels were characterized by their very thick walls and relatively narrow lumen—a circumstance which may in some measure serve to account for the slow development of the tumor; extravasated blood corpuscles were present in small areas here and there, and in some places extra cellular deposits of granular pigments, probably of hæmorrhagic origin. The softer, posterior, deep-seated portion of the mass in the orbit was of a dull red color, very friable and almost pulpy in consistence.

Portions of this, treated in the same manner as the preceding, were seen to consist almost entirely of small round cells interspersed with numerous extravastions of blood; in some places blood corpuscles and tumor cells were found mingled in almost equal proportions. The cells contained very large nuclei; possibly many of these were free nuclei, at least they had that appearance. In a few places similar small round cells were charged with a brown pigment granules, but as this always occurred at or in the vicinity of blood extravastions and in association with considerable quantities of free pigment, there is some doubt as to origin in the cells containing it. Certainly, neither the quantity nor the distribution of the pigment would warrant our calling this portion of the growth melanotic.

The stroma consisted of a finely granular, slightly fibrillated material. Blood vessels, as such, were not discoverable, but in certain small areas there existed an arrangement of embryonic-looking tissue, which probably belonged to the vascular system; here and there were channels of various widths enclosing quantities of blood corpuscles, but without definite walls, unless the gradual transition of round to elongated tumor cells, with their long axis parallel to the channel, could be considered as constituting the vessel wall.

It appears from the foregoing that we had to deal with a mixed

growth, the first encapsuled portion being distinctly fibrous in character, and perhaps best designated as a melanotic fibro-sarcoma, whilst the softer, deep-seated growth was evidently a round-celled sarcoma. In both, we are confronted with a wide deviation from the well-known propensities of these growths.

Assuming, as I think we may, that the primary lesion was a pigmented choroidal sarcoma, the date of its recurrence in the orbit after removal of the eye may fairly be placed at the period when the persistent orbital and neuralgic pains returned—that is, within a year or two after the eye was removed—inasmuch as the patient was entirely free from them for a year or two after the first operation, but since they returned, has never enjoyed more than a few days relief at any time.

So long as the growth had not extended beyond the limits of the encapsuled portion, its presence would certainly not have been revealed to the patient or to an unskilled observer, since it had not attained a sufficiently large size to encroach visibly upon the surrounding parts and alter their appearance; and in view of its fibrous character, it may very well have been growing slowly for years. The tendency to slow, or comparatively slow, growth in the more fibrous melanotic tumors is, I believe, generally admitted, but I have not been able to find any case on record *that so strongly emphasizes the principle or law as this one does*. Then, again, the round-celled, deep-seated growth can hardly have originated later than four years ago, when the orbit was found to have been nearly filled up.

The sudden enlargement and inflammatory attack of two years ago may have been due to a hemorrhage into its substance, and the obvious tendency to extravasation discovered by the microscope renders this assumption highly probable; nevertheless, the inflammatory attack might reasonably have been expected to excite or increase the tendency to rapid growth, which round-celled sarcomata are well-known to possess. This, however, clearly did not occur, and in spite of the apparently favorable conditions for rapid development, the case preserved its original torpid character to the end, and it is to be hoped the anticipated recurrence will follow in the same line.

I have been unable to arrive at any satisfactory explanation as to why pain was so conspicuous a symptom throughout the past ten years, for, however easily we may understand the pain which existed for years before enucleation of the diseased eye, there was certainly nothing in the nature, size or position of the orbital recurrence that should have rendered it the source of great or persistent pain; but the freedom from pain since its removal indicates the one as the cause of the other.

CASES IN PRACTICE.

By ALEXANDER SHAW, M.D., Watertown, Dak.

Case I—*Maggots in the Ear.*—J. B., male, aged 41, typesetter, came into my office hurriedly, and looked excited. He informed me in a somewhat hesitating manner that he had maggots in one of his ears, and to prove his assertion, showed me several which he had removed by means of a match. He suffered no actual pain, but a peculiar sensation as if something were moving in his ear, which made him feel nervous. Has had a purulent discharge from the ear for about twenty years. He said that a few days ago a fly got into his ear, and remained there some hours. Taking the ear-mirror and looking into the ear, I found the auditory canal fairly alive with maggots. I at once resorted to syringe and water, and removed forty-five maggots, each about one-eighth of an inch in length. All were alive and moved actively in the water. I again looked into the ear and could see the whole length of the auditory canal, but did not discover any more maggots. I now dried out the canal with cotton, and thinking I had removed all the maggots, sent my patient away, telling him to return the following day for further treatment. He returned in three or four hours and said he thought there were more of those animals in his ear, as he felt the same peculiar sensation he had felt before. While he was talking he put his finger in his ear and brought one away. I again used syringe and water, and removed thirty-four more. I now discovered how they had previously escaped my notice. At the inner end of the auditory canal there was a small piece

of necrosed tissue which had not become wholly detached, and also a narrow rim of the destroyed membrana-tympani; behind these the maggots would crawl, and give a good deal of trouble in getting them away. The following day, with a good deal of difficulty, I succeeded in getting one more away. It would no sooner come into view than it would again disappear. This one proved to be the last. I thus removed eighty in all, the patient himself taking away at least ten or twelve. It is an enormous number of maggots to have in the ear, although they were small. Had they been allowed to remain a few days, they would no doubt have set up more symptoms of a marked character.

Case II—*Injury to Deltoid Muscle.*—J. H., aged 45, farmer, while out hunting, fell on his right elbow, the forearm being bent. He does not know in what direction from the body the arm was. He feels a little soreness about the insertion of the deltoid muscle. At this point there is a good deal of tenderness on pressure, and when he makes any attempt to raise the arm an acute pain is produced at the same place. The pain produced is so severe that he cannot move the arm from the side at all. The movements of the forearm—flexion, extension, pronation and supination—are all normal. There is no deformity about the shoulder, no fracture, nor dislocation. On taking hold of the arm I can move it in any direction without giving him any pain. When I raise the arm to the horizontal position, and maintain it there, he can, by his own efforts, raise it above his head without causing any pain. It was several weeks before he could succeed in moving the arm from the side, and for several months it remained weak.

I look upon the injury in this case as being in the tendon of the deltoid muscle, at or near its insertion. It illustrates very well the action of the deltoid muscle, which is to raise the arm to the horizontal position, and no further. When the arm is at right angles to the body, other muscles, especially the serratus magnus, are brought into action to raise it above the head, as was well shown in this case.

Case III—*Poisoning by Oil of Tansy.*—Mrs. A., aged 27, married; has two children. I was hurriedly called to see the patient, as it was said she was dying. In two or three minutes I was before the patient, and found her sitting on the floor supported by one or two women. She was unconscious; there was flushing of the face, frothing at the mouth, and stertorous breathing. The skin was warm and moist, and the pupils normal in size. I was told that she had had spasms, and one of the women present informed me that she had taken, about two hours previously, forty drops of ergot for the purpose of procuring an abortion, as she feared that she was pregnant. She now recovered consciousness while being put to bed, and almost immediately began vomiting. I now ascertained by the odor of the substances vomited that instead of ergot she had taken tansy. The vomiting was encouraged by sulphate of zinc and warm water. She soon got better, but for a day or two the stomach was irritable, there being a little pain and some vomiting. These finally passed off, and she made a perfect recovery. After her recovery, she informed me that she had taken twenty drops of the oil of tansy about two hours before the convulsion came on. The first indication she had of sickness was a dizziness, immediately after which she became unconscious.

QUARTERLY RETROSPECT OF SURGERY.

By FRANCIS J. SHEPHERD, M.D., C.M., M.R.C.S, Eng.,
Surgeon to the Montreal General Hospital; Professor of Anatomy and Lecturer on Operative Surgery, McGill University.

Treatment of Urethral Stricture.—Dr. Wm. M. Stoker lately read a paper before the Surgical section of the Academy of Medicine of Ireland on the "*Treatment of Urethral Stricture by Internal Urethrotomy.*" (*Dublin Journal of Med. Science*, June, 1885.) After discussing the reasons for abandoning the treatment of stricture by Holt's method or "divulsion," he went on to say that if a stricture be tolerably recent, and if time and circumstances will permit, gradual dilatation may be tried, and will for a limited period be successful. Cases are met, however, where frequent catheterization will not be borne, or the circum-

stances of the patient demand speedy relief; in such cases the surgeon need have no hesitation in recommending division of the contracted portion without delay. He would go even further; he would not hesitate to divide any stricture, however recent, provided it were confirmed, and either unsuited to the gradual dilatation or disposed to recontract after it, and that the kidneys were healthy. In cases of old stricture, he would always divide internally, except in cases with old standing perineal fistulæ. In these latter cases, he said, nothing short of an external operation is likely to succeed. If the perineal fistula is recent and solitary, internal urethrotomy should be tried as a primary measure. Dr. Stoker, in performing internal urethrotomy, prefers cutting from before backwards after the method of Maissonneuve, and he stated that he had performed the operation 25 times without a death. In one case only did troublesome hæmorrhage occur. In but one case had there been any return, and some had been operated on ten years ago. Dr. Stoker prefers incising the upper wall of the urethra, because less hæmorrhage follows this incision. If hæmorrhage should occur, then he ties in a large catheter. After the operation, a large catheter should be passed and immediately withdrawn; then every other day, for a month, a No. 12 to 14 should be passed, and after that once a week for the rest of the patient's life. The following are his conclusions:

1. Internal urethrotomy is superior to any form of dilatation.

2. Maissoneuve's method is much better than that of Civiale and his followers.

3. Certain details should be followed out, as (*a*) completeness of division, (*b*) disuse of anæsthetics, (*c*) incision of upper wall of urethra, and (*d*) non-retention of catheter in the urethra subsequent to operation.

To this latter procedure Dr. Stoker attributes the freedom of his cases from inflammation and other troubles.

In a paper by Mr. Reginald Harrison in the *British Medical Journal* of July 18th, 1885, on the "*Treatment of Urethral Stricture by combining Internal and External Urethrotomy*," he says he differs materially from many surgeons of large experience as to the advisability of the operation of internal

urethrotomy in the majority of cases. He thinks that a person with stricture had much better employ dilatation in some form or other, so long as he can keep himself comfortable and the size of the urethra is not progressively diminishing. Internal urethrotomy, Mr. Harrison holds, is extremely liable to be followed by a form of fever which is exceptional, unexplainable, and occasionally fatal. It is not the ordinary wound fever of operations; it is generally ushered in with a rigor, and, in its course, presents every degree of mildness and severity. It is occasionally attended with suppression of urine, and it sometimes proves fatal in cases which seem well adapted to operation, and after death no satisfactory explanation as to its cause or pathology can be offered. He holds, also, that internal urethrotomy does not furnish better permanent results than other methods of treatment, besides, after the most successful performance of the operation, the patient is obliged to pass an instrument at intervals for the remainder of his life, which indicates that only a partial good at the best is to be hoped for from the operation. On theoretical grounds, Mr. Harrison thinks the operation has much to recommend it, and on carefully considering the whole subject, it seemed that, if it were possible to assimilate the performance of internal urethrotomy with some other operations on the urinary apparatus, where there was absence of any special form of fever or septic intoxication following them, and where the wounds inflicted did not deal with scar tissue, which subsequently manifested an inordinate disposition to contract, the more prominent objections connected with internal urethrotomy might be mitigated, if not entirely removed. He attributes the rigors, fever and other symptoms following urethrotomy to the passage of urine over the cut surface, and quotes Prof. Berkeley Hill, who says that in the cases of internal urethrotomy performed by him, where the catheter was afterwards left in to lead off the urine there were no rigors or fever, but in those cases where a catheter did not lead off the urine, the temperature remained normal for as many hours as the patient refrained from micturition. He also mentions that Prof. Bouchard has drawn attention to the poisonous effects of normal urine when injected into the blood, even in small quantities.

Mr. Harrison, in certain cases which would not yield to dilatation, has performed a double operation—first internal urethrotomy and afterwards a perineal section, and introduction through this into the bladder of a drainage tube. The urethra is opened from outside, of course behind the stricture, and in the membranous portion. Thus the urine is voided through the tube, and the wound made in the stricture by the urethrotome protected against urine passing over it. He has operated in this way twelve times, and after this double operation there has never been a rigor or any fever. The urethra has been placed at rest, the process of repair has been facilitated, and the urethra has healed up, or, to use his own words, "a cicatricial splice has been formed and completed without contact with urine or other possible source of irritation."

The perineal operation is performed as follows: Patient being placed in the lithotomy position, and a grooved staff introduced, the membranous urethra is punctured with a long, straight finger knife one inch in front of the anus, the back of the knife being towards the rectum, the incision is slightly enlarged forwards so as to permit the introduction of the index finger. If the staff be found exposed at the bottom of the wound, all is well and good; but if not, along the finger, reintroduced to the bottom of the wound, is passed a blunt, though pointed knife, with which the few remaining fibres that remain between the tip of the finger and the groove are cut away. When the groove of the staff is felt, Wheelhouse's small probe-pointed gorget is slid along it, the staff is withdrawn, and the drainage-tube passed along the concavity of the gorget into its position. The drainage tubes are of gum-elastic, four or five inches in length, and somewhat thinner than an ordinary index finger. The tube should be just within the bladder and no more. They are secured by an eye on each side, through which a tape can be passed.

Mr. Harrison believes that he, by this double operation, not only avoids urinary fever, but that the cicatricial slice formed in the urethral stricture has not so much tendency to contract as the scar tissue would when the surface is being continually irritated and exposed to septic influences. To facilitate this

he washes out the urethra with an antiseptic solution, and occasionally introduces a small drainage-tube into the meatus and out of perineal wound, and keeps this aseptic by washing out with some antiseptic injection. He says this operation is not applicable to penile strictures or those behind the scrotum, and is suituble only to those cases of bulbous stricture which do not yield to dilatation.

The proper method of treating organic strictures of the urethra has been for years a much-vexed question. Each writer recommends a certain form of treatment as the only sure way of getting good results. Some advocate gradual dilatation ; others internal urethrotomy not only in cases of old standing relapsing strictures, but in *every* case of stricture, even those which are only detected by means of a No. 25–30 sound. Some surgeons, even yet, in bad cases invariably perform external urethrotomy, and extol the wonderful benefits of this operation ; a few still recommend divulsion, and some the combined operation of urethrotomy and divulsion. Again, internal urethrotomy itself is performed in various ways, and each way has its ardent supporters, who condemn every other method. Some cut from behind forwards, others from before backwards ; some incise the upper wall of the urethra, and others the lower ; some make a number of cuts, others only one ; some leave the catheter in after the operation, whilst others attribute their success to leaving it out. The instruments are of endless variety, vying even with those used by the gynæcologist for treating the os uteri. One man invents an instrument, another modifies it, and this is again modified, and so on *ad infinitum*. The probability is that the good result obtained depends more upon the operator than the method of operating and the kind of instrument used. The old treatment of stricture by cauterization with the solid stick of nitrate of silver is still advocated by some surgeons.

Sir Henry Thompson, who, perhaps, has had more experience than any living surgeon in the treatment of stricture, said in his lectures, delivered last year before the Royal College of Surgeons, that at first it was only in the worst cases that he resorted to internal urethrotomy, but that now he has been practising it

with continually greater freedom. He had performed (at the time of the lectures) internal urethrotomy on between three and four hundred patients, with a mortality of less than 3 per cent. He only performs the operation in those cases where the stricture shows a tendency to recontract, or which are intolerant of bougies. In performing the operation, Thompson uses Civiale's method, cutting from behind forwards and in the floor of the urethra. Before performing this operation, it is necessary that the urethra should be dilated to the size of a No. 5 bougie; if the stricture be tight, then a small bougie is introduced and tied in for two to four days, and when it is withdrawn, the stricture is dilated sufficiently for the passage of the urethrotome. Immediately after division a large sound is passed, and if there is any difficulty, the urethra is again incised. A gum-elastic catheter is now tied in for at least 24 hours. In cases where the stricture returns after urethrotomy, Sir Henry Thompson repeats the operation. This he finds necessary in the majority of cases. In a very few only is the relief permanent.

Last year, at the meeting of the British Medical Association (*Brit. Med. Journal*, 1884), Mr. Walter Coulson read a paper on *Internal Urethrotomy*. After describing the various methods practised by different surgeons, he stated his preference for the operation, cutting the roof of the urethra from before backwards, and the instrument recommended is Teevan's modification of Maissoneuve's. After the cutting is over, a full-sized silver catheter is introducted, the bladder emptied, and the instrument immediately withdrawn. Then the patient must remain in bed, with hot bottles to the feet, and take three grains of quinine in half an ounce of brandy. If no rigors occur, the patient has a hot bath at night, and 48 hours after a large-sized bougie is introduced and the patient allowed to get up; afterwards a bougie is passed every three or four days for a fortnight, when the patient is instructed to pass one for himself once every week. As to the results—out of 206 operations performed at St. Peter's Hospital, 10 terminated fatally. In many cases no anæsthetic is used, and the cure is permanent and radical in the cases that recover.

In my experience, the cases that cannot be treated success-

fully by gradual dilatation are few indeed, and I have rarely, except in penile strictures, which do not dilate easily, found it necessary to perform either external or internal urethrotomy. If the same treatment recommended after internal urethrotomy (that is, regular passage of bougies or sounds) be carried out faithfully, I think quite as few strictures will be found to recontract after *gradual* dilatation as after internal urethrotomy. Of course dilatation takes time, which cannot always be afforded, and tests the patience of both the surgeon and the sufferer, but it is infinitely safer than any other method of treatment. It seems to me that a mortality of 5 per cent. is too large a one to undertake the operation hastily and without due consideration. Even an experienced operator like Thompson has a mortality of 3 per cent. Certainly in some cases, such as old indurated multiple strictures, resilient strictures, and where the passage of a bougie is followed by rigors and great elevations of temperature, internal urethrotomy is indicated, and in others, where there is much induration and many perineal fistulæ, external urethrotomy is advisable, but these cases are not very common, and many of these can be successfully treated by gradual dilatation.

The fever following catheterization is often controlled by full doses of quinine (10 grs.) or 10 grs. of Dover's powder and confinement to bed for a day. I have only seen one death following dilatation, and that was recently in an old case of stricture with advanced disease of the kidneys. That the passage of urine over the cut or torn surface of the urethra always explains the occurrence of urethral fever I can hardly believe; if so, why is it that in some cases of stricture a catheter cannot be passed without the occurrence of rigor and fever, whereas if a large dose of quinine or 10 grains of Dover's powder be given in the same cases these untoward symptoms do not appear. I have seen several such cases. The fact that opinion is divided as to tying in a catheter after the operation shows that the cause of urethral fever is not yet understood. Mr. Harrison's double operation no doubt offers certain advantages, but I fear it will never be more popular than preliminary tracheotomies in operations on the mouth. It will be hard to persuade surgeons that a double operation does not increase the risk.

In America especially has the treatment of internal urethrotomy been carried to excess ; not only is it performed for every case of real and supposed stricture, but even for gleet. Only the successes are published ; the failures and fatalities are little heard of. The reason gradual dilatation is not popular is (first) that it is tedious, and that the immediate results are not so brilliant as urethrotomy, and (secondly) that the fashion has changed. I am sure, if a surgeon had to treat himself for an ordinary stricture, he would much prefer gradual dilatation to the cutting operation.

Dr. Robson (*Brit. Med. Journal*, March 7th, 1885) reports a case of traumatic stricture treated successfully by excision. He recommends this operation in all forms of relapsing strictures and those which do not readily yield to treatment, especially if situated anterior to a point half an inch in front of the membranous urethra. After the excision, a catheter is tied in, and the cut surfaces of the urethra sewed over it. Six months after the operation, a No. 13 sound passed easily.

Mr. Swinford Edwards, F.R.C.S., in the *Brit. Med. Jour.* of July 11th, 1885, publishes a lecture on "*Bougies, their Use and Abuse*," in which, after describing the various kinds of bougies and the method of using them, says he is no friend to the treatment of stricture by continuous dilatation, for he believes it to be more fraught with danger to the patient than internal urethrotomy. He, however, gives no reasons for this statement. He also says that he does not hold with the practice of tying in a catheter after the operation of internal urethrotomy, as he is of opinion that the irritating presence of an instrument in the urethra will almost certainly set up inflammation of the urethra and bladder, and that we may congratulate ourselves if our patient escape urethral fever leading to suppression of urine and death. Perineal abscess, extravasation of urine, and orchitis, are other local complications. Any, or all of these, may succeed the passage of a bougie, "but," says the author, "they are certainly more likely to occur in treatment of stricture by continuous dilatation."

I confess that I am somewhat surprised at these opinions of

Mr. Edwards, which are at variance with the experience of most surgeons. Sweeping statements such as these, unsupported by facts, do harm, and only tend to show the marked bias of the author in the direction of his own private method of treatment by urethrotomy.

Operative Treatment of Enlarged Prostate.—Prof. E. Bottini, by an operation entirely original, has succeeded in permanently relieving ischuria due to prostatic enlargement. The operation was performed in July last, and the permanence of the results gives promise of a noteworthy addition to the surgical treatment of prostatic disease, which heretofore has been considered as almost entirely tentative. The patient was a man aged 68, and for the last five years had difficulty of micturition. This increasing, and the patient losing strength, Dr. Bottini proposed cauterization. Previous to the operation, the bladder was treated with solutions of boracic acid and sulpho-carbolate of zinc, and the attempt was made to strengthen the contractility of the bladder by cold injections. After a few weeks, the conditions becoming more favorable, the patient was chloroformed and the galvano-cautery introduced into the urethra with the cauterizing blade against the enlarged prostate. The instrument was so constructed that all parts, save that by which heating was necessary, were kept cool by a current of ice water. Cauterization of the prostate was continued 45 seconds, which then being deemed sufficient from the inclination of the instrument, the current was broken. On the withdrawal of the instrument, all parts were found to be cold. The patient was put to bed and a catheter left in the urethra. Four days after the operation the patient was without fever ; the bladder was washed twice a day with a 2 per cent. solution of sulpho-carbolate of zinc. On the seventh day, small portions of escharotic tissue began to escape with the urine. The first spontaneous discharge of urine occurred about three weeks after the operation, and in three months urination was entirely natural. Eight months after the operation improvement still continued, and the general health of the patient was excellent.—(*Gazetta degli Ospitali*, Feb., 1885, quoted in *Amer. Journal of the Med. Sciences*, July, '85.)

This operation was fully described and the instruments figured by Dr. Bottini in 1877 in Langenbeck's *Archiv f. Klin. Chir.*, Bd. XXI, Hft. 1, and a condensed translation of the article was published in this JOURNAL in August, 1877 (Vol. VI, p. 83.)

Mercier's operation of removing a portion of the obstructing prostate is being practised now by some surgeons. Dr. Gouley of New York has an instrument with which he punches out a piece of the gland. Mr. S. Edwards (*Lancet*, July 11th, '85) reports a case in which he successfully performed prostatectomy with Gouley's instrument, to the great relief of the patient. There was little bleeding and no bad symptoms afterwards, the patient leaving hospital in a week.

Mr. Harrison's operation, which has been highly spoken of, is performed by opening the membranous portion of the urethra and removing the obstruction partly with a probe-pointed knife and partly by divulsion with the fingers. A large tube is then introduced into the bladder, and through this a smaller one to carry the urine. A stop-cock arrangement has been also used, to enable the patient to go about.

At the meeting of the American Medical Association, held in New Orleans in April last, Dr. J. W. S. Gouley of New York read a paper on "*Some points in the Surgery of the Hypertrophied Prostate*" (*Medical News*, May 2nd, '85). After describing the symptoms and diagnosis of this disease, he said the surgical treatment was divided into two parts—1st, Mechanical means of relief; and 2nd, The removal of the organ by surgical means. All hard catheters should be discarded, except in cases of false routes. A soft catheter should have as small and as smooth an eye as possible—never two eyes. Small catheters are usually preferred, but too small an instrument should never be used. Where false passages exist, a large catheter should be employed, and where this fails, the invaginated catheter of Mercier is usually successful. . . . . Evacuatory catheterization should be commenced early in the history of each case, but in old cases, where the bladder has become distended, it is of the greatest importance that all the urine be not removed at one time. The catheter should be used

as often as from twice to five or six times daily. If the catheter be too freely used, many of the alarming symptoms are relieved and patient seems much better than before, but at the end of a few days the patient begins to show symptoms of disease of the kidneys, which proves fatal in a month or six weeks. When there is intolerance of the catheter, he advocated the withdrawal of a small part of the residual urine at intervals of once every few days, until tolerance was established. He laid great stress on the injection of medicated fluids into the bladder in a quantity to correspond to the amount of urine removed. A solution of borax was most employed, but various other agents might be used, as when the urine was strongly alkaline, an acid might be added; when large accumulations of mucus and pus were present, alkalies were indicated; and when phosphates were deposited, weak solutions of acetate of potash were recommended. The use of carbolic acid he did not endorse, but considered the nitrate of silver, in properly diluted solution, one of the most valuable agents we possess. Morphia, hyoscyamus or cocaine may be added in cases of great vesical irritability. In certain cases, especially when the central lobe was enlarged, he advocated removal of the obstructing portion.

In the discussion which followed, Dr. Gouley claimed priority for the operation of excision of the prostate.

Massage of the Prostate for Retention.—Dr. Le Rütter, a Dutch surgeon, has found means to subject the prostate to a kind of massage, and in this way has completely cured two patients of the ages of "over 50" and 70 respectively. The method employed is to pass the forefinger up the rectum, and then move the prostate to the right, left, and in a vertical direction three times each way, rubbing it firmly afterwards. This proceeding is, as may be supposed, rather disagreeable to the patient (to say nothing of the operator's sensations), and it cannot be borne for a long time. In one of the cases 20 massages, and in the other 15, were required to effect complete restoration to pass urine freely. In both a small amount of bleeeding took place from the urethra, caused by the manipulations of the prostate, for which liquor ferri sesqui-chloridi was given with satisfactory result.—(*Brit. Med. Journal*, Aug. 1st, 1885.)

Compression in Acute Orchitis, both simple and complicated. —This is effected by making gradual traction on the inflamed testicle, thereby separating it, as much as possible, from the external abdominal ring, towards which the cremaster has a tendency to pull it. Having then isolated the organ, several turns of bandage are made around it above, preventing its reascent. From this *point d'appui*, the whole testicle is covered by oblique circles of the compressing bandages, which is afterwards covered by a starched spica-bandage. Mr. Thiry, of the Hôpital St. Pierre, has long been in the habit of treating cases by this means. The author asserts that he has not seen this method fail in a single instance, however acute the inflammation. The effect of compression is at once to give relief to pain. Several cases are recorded in which the cure was complete, on an average, in eight days. The application may have to be repeated daily, according to the rate of diminution of the swelling. Three applications, as a rule, were sufficient.—(*La Presse Médicale Belge;* quoted in *Annals of Surgery*, July 1885.)

This modification of an old method of treatment is not likely to be practised extensively. It is difficult of application, requires time, and, besides, offers no advantages over the ordinary methods, such as applications of ice, hot poultices, or scarification. In cases where there is much pain, I have found no treatment so beneficial as making incisions into the scrotum and applying a hot poultice. Puncture, when there is much distension of the tunica albuginea, is often marvellously effective, but in private practice it is difficult to get the patient to submit to it.

Radical Cure of Varicocele.—In the *Lancet*, April, 1885, Mr. Henry Lee describes the operation which he has been in the habit of performing for the radical cure of varicocele. The patient is placed under ether, and on the left side of the bed. A portion of the skin of the scrotum is then pulled up and removed by scissors or a knife, the largest diameter of the wound being transverse. The enlarged veins are easily distinguished from the vas deferens, and any large artery must be separated before the operation is continued. A harelip needle is then introduced through the wound under some of the veins, and

another needle passed half an inch distance under the same veins in the same way, and a figure of 8 ligature is put round the needles and over the veins. The veins between the needles are then divided, and a cautery applied to their divided ends and allowed to remain in contact with them for a quarter or half a minute. The tissues adhere firmly to the cautery, if not too hot, and are gently separated by the handle of a scalpel. The needles placed under the veins are now removed, and the edges of the wound brought together by short harelip pins or by a continuous carbolized catgut suture. The wound generally heals in great part by first intention, and the patient can walk about in a week. In some cases where the scrotum is not relaxed, the subcutaneous division of veins answers very well without removal of any skin.—(*London Medical Record*, June 1885.)

Worsted Truss for Infantile Inguinal Hernia.—Mr. Edward Lund refers, in the *Brit. Med. Journal* for June, 1885, to the worsted truss described by Mr. Coates in 1849, and strongly advises its use. A skein of Berlin wool is looped across the abdomen; one end of the loop is placed directly over the outer abdominal ring, the hernia being reduced previously. The folded worsted is passed horizontally across the abdomen, above the line of the crest of the os pubis, to the opposite side, round the hip, behind the pelvis, and over the hip of the side of the hernia. The folded end is then passed through the loop of the skein, and will here form a knot or bulged portion, which must be carefully adjusted so as to lie against the hernial opening, and, being carried down the upper part of the thigh, between it and the scrotum (if a male), it is brought round the external side of the thigh near to the top of the great trochanter, and there tied or fixed with a safety-pin to the band of worsted already round the pelvis. There is an advantage in the fact that the child can be bathed with the truss on, and a fresh one then be applied, the first being dried and cleaned for future use.—(*London Medical Record*, July, 1885.)

Treatment by Section of Hydrocele by the Antiseptic Method.—In discussing the treatment of hydrocele by the above method, Mr. Edward Bellamy says (*Lancet*, July 4th, 1885): "The

few remarks I make are based on a considerable number of cases I have treated both in hospital and in private practice, in the early and later stages of hydrocele, by which latter I mean those which have been repeatedly tapped and in most instances injected. It is hardly necessary to take up space by instancing individual cases. It is certainly time that the old-fashioned method and the supposed radical cure by continuous injection was done away with, as painful, dilatory, and generally useless. I claim no originality whatever in this treatment. I desire to call the attention of practitioners to the fact that they should invariably adopt the method of free incision with strict antiseptic precautions, and I cannot understand why it is not more universally carried out. Every surgeon knows of the method, but, as far as I can see, contents himself with adhering to the usual proceedings. There is no danger in it. An anæsthetic may be given if necessary. The healing is rapid ; the cure almost certain, if not absolutely so. The operation is as follows : The diagnosis, of course, being established, the scrotum should be shaved, and (if the surgeon thinks necessary) the spray used ; the tumor is firmly grasped so as to render the parts as tense as possible. A clean sweep through all the scrotal tissues is then made with a bistoury from the cord to the base, and the fluid escapes. Every bleeding vessel, however small, must be twisted or tied most scrupulously, and the interior of the sac carefully examined for any vessel which may have been wounded or given away. The cavity should then be stuffed, not too tensely, with either lint soaked in 1 to 40 carbolic oil or gauze, and the upper part of the edges of the wound stitched together, including all tissues. A small tag of the contents being left out of the most dependent part in the contingency of drainage, a pad of salicylic wool is placed over all, and the scrotum supported by a cushion between the thighs. In a couple of hours the parts may be dressed and the contents of the sac withdrawn. As a rule, considerable contraction of the walls of the sac will have set in, but it is advisable still to introduce the antiseptic material so long as any appreciable cavity exists, and this is generally for about a week in very favorable cases, when it will be found impossible

to pass anything into it, and merely the lips of the original wound are left to close. Tubal drainage is, I venture to think, unnecessary. I have not yet met with any untoward constitutional symptoms by adopting this method, which is equally applicable to encysted hydrocele of the cord."

Hydrocele cured by Elastic Pressure.—In the *Meditz Obozreine*, No. 21, 1884, p. 808, Dr. P. G. Rosanoff of Zvenigorod records a case of chronic hydrocele in which complete cure ensued after wearing a well-fitted elastic bag for about six weeks. An examination of the patient 15 months later showed that he was still entirely free from the former disease.—(*Lond. Med. Record*, Feb. 1885.)

Treatment of Gonorrhœa by a New Drug.—The new drug here referred to (*Lancet*, Feb. 28th, 1885) is Jacaranda lancifoliata—a plant indigenous in Colombia, South America, and used by the natives for venereal diseases. This drug in Mr. Wright's hands has proved most efficacious in diminishing pain and stopping discharge in acute cases; while it has been successful in several cases of gleet which had resisted previous treatment. A liquid extract is made from the leaf, and may be given in doses of 20 to 30 minims three or four times daily.—(*London Med. Record*, June, '85.)

Hebra's Treatment of Soft Chancre by Salicylic Acid.—After washing the penis with lukewarm water and soap, and drying it well, the powdered acid is applied to the sore and its edges, and maintained in place by pledgets of cotton wool. The application is renewed after 24 hours, and on the third day simple ointment is substituted for the acid. Twelve hours later this eschar disappears, and after about three days the sore is healed.—(*Lond. Med. Record*, June, 1885.)

Correspondence.

LETTER FROM BERLIN.

BERLIN, July 7, 1885.

The appointment to fill the vacancy created by the death of Prof. Frerichs has, after a good deal of "red tapeism," finally been effected. As intimated in a former letter, Prof. Leyden becomes the direct successor of the late Prof. Frerichs. He will consequently enjoy the singular fortune of being the immediate successor of Germany's two greatest clinicians—Traube and Frerichs. Prof. Gerhardt of Wurzburg has received and accepted the call to the chair vacated by the above appointment. But, hereafter, the two clinics will rank equally; instead of being called "No. 1" and "No. 2," as heretofore, they will be known respectively as the "Gerhardtsche" and the "Leydensche" clinics, each having the same number of beds, assistants, etc.

The newest star of the Berlin University is described as a short, thick-set man, running into the fifties, with hair beginning to turn gray. He studied medicine at Heidelberg and Wurzburg, and began his academical career as clinical assistant to Bamberger and Rinecker at the latter University. In the beginning of the year 1870 he was appointed ordinary professor to the chair of internal medicine at Jena. Here the goddess Fortuna showered down her German blessings upon his head in putting under his care two German princes during an illness that ended in complete recovery. In 1874, when Prof. Bamberger of Wurzburg received the call to Vienna, Prof. Gerhardt was the only candidate for the vacancy, an honor that has its counterpart with us in the political world only—an election by acclamation. At this University he received his present call, and does not come to Berlin until the opening of the winter semester. As an author he has acquired considerable fame, at least in Germany, by his works on "Diseases of Children" and "Auscultation and Percussion."

Prof. Senator conducted the clinics *pro tem.* during the summer semester, and as he filled the post so ably, it was thought by

many that he would be permanently appointed. It is rumored about—I don't know with what truth—that the present bigotry, learnedly called "anti-Semitism," prevailing in Germany has been the indirect cause of his not being appointed. Professor Senator won great popularity during his short course as lecturer. In spite of the uncomfortable hour, between 11 and 12, at which time the sun unmercifully poured its rays through the unscreened windows of the auditorium—in spite of the heat and ill-ventilation, the auditorium was crowded every day he lectured. Many had to stand,—your correspondent feelingly refers to these, as he formed one of the unfortunates. Last week the students gave Prof. Senator "a fest-commers."* On this occasion all the speakers referred to the almost unprecedented incident of a professor winning such popularity in so short a time; and also to the unprecedented course (Germans speak bluntly) of the Faculty in appointing one from another University when there existed already one in their midst who, in every way, could so well fill the post. When one takes into consideration whom he had to succeed, and that without any time for preparation, Prof. Senator's success really becomes remarkable.

The saying of the wise king, which has been repeated by sundry philosophers and wits since his time, "that there is nothing new under the sun," met with an apparent contradiction the other day, at one of the clinics, in the form of that "rara avis"—a really unique case. The case in question was symmetrical external ophthalmoplegia, with ptosis, the superior oblique only remaining unaffected. The patient has to carry his head thrown back, and to one side, in order to see anything. The singular and interesting features of the case has still to be mentioned. It was congenital and hereditary. The patient's mother suffered from the same affection, having acquired it in middle life, and his only child, a little girl of 18 months, came into the world with precisely the same condition. The father and daughter were presented at both Prof. Hirschberg's and Mendel's clinics. Both of these professors said they searched medical literature in vain for a similar case.

* A banquet consisting of indifferent beer in unlimited quantities, bad music and worse singing.

The pendulum of "meddlesome midwifery," after having reached its maximum limit when every accoucheur felt it his imperative duty to remove a retained placenta two hours after delivery, forcibly by the hand introduced into the uterus or by the curette, is beginning to swing in the opposite direction. Here in Berlin, Schröder and Gusserow teach that there is no harm in leaving the placenta in utero for even two days should no alarming hæmorrhage occur. They would forcibly remove the placenta only on the appearance of the latter symptom; otherwise they think it is much safer to leave it intact. Great danger, they say, resides in forcible removal, for, as a rule, a portion of the placenta remains attached to the wall of the uterus. This is almost certain to undergo putrid decomposition, and very likely to give rise to septic fever. But the intact placenta may remain in utero two days or longer without undergoing any decomposition. In most cases of retained placenta, the unaided uterus will have cast it out before that period of time elapses. This teaching carries the greater weight with it, as it comes from men who are strong adherents of strict antisepticism.

Your readers will doubtless be pleased to learn that Dr. Ruttan, Demonstrator of Chemistry in McGill University, who has been here in the chemical laboratory during the summer, has had the good fortune to discover a new chemical body, a hydro-carbon, which, with its derivatives, complete an important group in the aniline series. True chemist to the core, his ecstacy as a discoverer is marred by the fact that the discovery is likely to be of practical benefit. A full account of the compound will, I believe, shortly appear in the "Bericht für Deutsche Chemie Gesellschaft."

H. N. V.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

CASES OF LEAD POISONING.

UNDER DR. MOLSON.

CASE I—"*Cerebral Plumbism*"—*Delirium—Paralysis—Coma—Death.*

E. G., aged 24, single, employé in white lead factory, was admitted October 21, 1884, suffering from lead colic—intense abdominal pain, diarrhœa, stools mucous and green, severe headache, and general weak condition. Family history negative as regards nervous diseases. Has always enjoyed good health, with the exception of an indefinite history, obtained from the patient, concerning past attack of temporary insanity, not corroborated by friends. Pursued study of medicine for two years in Dublin University; was very intemperate. The patient arrived in this country nine months previous to admittance; for six months out of the nine had worked in white lead factory, during which time had had several slight and severe attacks of colic, obstipation, with clay-colored stools and marked fœtor. Gradually became weak, and mental condition subsequently becoming affected, incapacitated patient for work. For the last three years was in the habit of using morphine in large doses to overcome the horrors of dissipation.

On admission.—Very anæmic and sallow; emaciation marked; muscles soft and flabby; conformation good; anxious, troubled expression, pupils dilated, very much excited, and difficult to control as regards keeping in bed. Intense abdominal griping pain, severe in umbilical region, but diffused over all areas; pain somewhat relieved by pressure. Tongue dry and brown; anorexia. Nausea; no vomiting. Bowels relaxed; stools greenish and very offensive. No cough or other pulmonary symptoms. Absence of any definite paralysis or paresis as regards extensors of forearm or leg; all other muscles in normal condition. Statements not to be relied upon; frequent hallucinations and delirium

at night; persists in leaving bed and wandering about wards. Pulse 110, weak, rapid and compressible; respirations 26; temperature 100°.

Examination.—Gums show a distinct, pathognomonic, intense dark lead line just beyond margin of gums; teeth covered with tartar. Lungs and heart negative, with exception of pulmonary accentuation of second sound. Urine: specific gravity 1020, high color, acid; no albumen or lead detected by most approved tests.

Treatment.—Potass. Iodide grs. xv every six hours.

Oct. 23, 24 *and* 25.—Remained in about same condition. To control delirium at night, Chloral Hyd. ʒss was administered. 28*th.*—Very restless; delirium constant, low muttering in character, with frequent hallucinations. Chloral discontinued: find patient to rest much better. Evening temperature 101°: morning, 99°. Pulse weak, 116. Tongue dry and brown. Colicky pains less. Otherwise, condition same as when admitted.

From Oct. 30 to Nov. 20 nothing of special note occurred, with exception of patient becoming gradually weaker, and to-day can scarcely elevate hand to head; arm finally dropped over edge of bed, patient unable to elevate. Marked tremor when attempting to perform any definite movement. No wrist-drop or other localized paralysis. Great loss of power in legs, especially right. Lead line on gums as before. Pulse 120, very compressible. Temperature ranges 101°—98°. Mental condition, restless, insomnia, delirium, accompanied by hallucinations and low muttering, are the prominent features; patient continually tossing from side to side, and rolling head about in all directions.

Nov. 25.—Very restless at night; somewhat aphasic; speech thick and faltering; semi-comatose; arms and legs becoming weaker; other conditions same as last note. 27*th*—Wrist-drop gradually becoming marked in hands the last few days, and now seen to perfection; absence of similar conditions in feet. Semi-comatose.

Dec. 3.—Gradually losing ground; condition one of extreme prostration, with coma. Pulse 140, compressible, and exceed-

ingly weak ; temperature 101½°. Died this morning at eight o'clock from exhaustion.

Post-mortem examination.—Lead line on gums confirmed by microscopical and chemical examination. No organic lesion in brain or cord. Granular degeneration of flexors and extensors of forearm. Liver, spleen and kidneys soft, slightly enlarged, and friable ; no change otherwise. No deposit of lead found in any of the organs.

UNDER DR. ROSS.

CASE II— *Wrist-drop—Improvement.*

D. C., aged 25, seamstress, single, was admitted January 9, 1885, complaining of complete loss of power in her arms and hands. Emaciation of same and general weakness. Has always been very strong and healthy up till three years ago. At that time suffered from an attack like the present—weak, numb and emaciated condition of arms and hands ; came on gradually, and lasted for two years. Loss of power not complete ; able to perform light work, but could not accomplish fine movements. Lower extremities normal. Recovery gradual. Since then, and up to two months ago, enjoyed fair health, and had almost complete return of power to upper extremities. Absence of all abdominal symptoms except constipation. No history of rheumatism, syphilis or traumatism.

On admission.—Anæmic, sallow, general emaciation slight, expression dull and stupid, pupils dilated, skin dry and rough, tongue heavily coated, breath fœtid, obstipation and deficient appetite ; no abdominal pains or other symptoms of colica pictonum. Muscles of hands and arms soft and emaciated, and skin hangs loosely. Thenar and interossei muscles very much wasted ; can with great difficulty raise hands to head or opposite shoulder : sensation good. Dynamometer shows 5 lbs. for each hand. Marked wrist-drop, simulating the paws of a kangaroo. Considerable loss of power in lower extremities. Gait weak, unsteady, extensors being the muscles principally affected ; sensation normal. Reflexes present, very weak and difficult to produce. No ankle clonus. Perfect control over functions of

bladder and rectum. No fibrillar contractions or tremors; condition of central nervous system normal. Examination of heart and lungs results in negative facts. Urine: specific gravity 1021, acid, color light; no albumen or lead detected. Characteristic extensive lead line following margin on both upper and lower gums.

Treatment.—Ferri et Strych. Cit. grs. iii t.i.d.; also put hands and arms up in splints.

Jan. 16.—Lead line same as last note. Dynomometer shows left 6 lbs; right 5 lbs. Bowels regular; had to use purgatives freely. No headache. Pulse 80; temperature at all times normal.

March 16.—Since last note, motor power in arms and hands has been gradually increasing, and regained somewhat the loss in substance. Wrist-drop remains, but very slight. Dynamometer 7 lbs. each. Considerable return of power in legs; can walk fairly well. General condition good comparatively speaking. Exit to-day. Have been unable to follow case outside. In this case it was found impossible, after careful investigation, to determine the source of the lead contamination.

CASE III.—*Severe Colic—Slight Wrist-drop—Improvement.*

O. B., female, aged 29, servant, single, sought admission into the hospital on the 13th of February, 1885, suffering from general weakness, pain all over body, but chiefly situated over areas of abdomen. She gave a history of general delicate health for the past four years; previously quite well and strong. At that time confined; post-partum hæmorrhage followed, which left patient very anæmic and weak.

Present condition.—Muddy, sallow complexion; very anæmic; pupils dilated, dull, heavy expression; tongue coated; breath fœtid; appetite diminished; obstipation; constant headache. No marked emaciation of body in general. Muscles of arms soft and flabby. Motor power good; sensation normal. Wrist-drop to slight extent. Condition of lower extremities weak. No paralysis of extensor muscles; sensation normal; reflexes present, equal and normal. Abdomen somewhat scaphoid, hard,

tender over epigastric region. Some griping, colicky pains, relieved partially by pressure. Gums pale, characteristic well-marked lead line. Urine: specific gravity 1012, acid, color high; deposit of mucus and lithates; no albumen or lead. Heart and lungs negative.

Treatment.—Potass. Iodide gr. x ter die; purgatives; liniment, Chlorof. with Opium applied to extremities.

Feb. 20.—Wrist-drop well marked; abdominal colic and other symptoms same as when admitted.

March 21.—Could not impress upon patient the necessity of remaining in hospital. Left this morning, condition being somewhat similar as when admitted. Wrist-drop present to slight extent. Can walk well. Bowels regular, and abdominal pain only occurring at long intervals. Has metallic taste in mouth. Gums in same condition. Continued taking iodide for two weeks, under observation, after exit, but subsequently lost sight of.

CASE IV.—*Epilepsy—Semi-coma—Paresis—Cure.*

H. M., aged 54, single, employé in black-lead works, was brought to the hospital on 24th of May, 1885, in a state of semi-unconsciousness, unable to walk without assistance. Impossible to obtain any history from patient, but found condition to be as follows: Anæmic; sallow subicteroid hue; pupils equal, very sluggish; restless, insomnia, and persists in leaving bed; wandering delirium; hyperæsthetic condition of legs, but especially abdomen; cries out lustily when pressed upon; belly flaccid, absence of any tumor or other abnormal condition; no vomiting or purging; tongue coated (breath offensive), edges irregular and lacerated, with recent and old scars caused by teeth during convulsive seizures. Appetite deficient and bowels constipated. Has bruise beneath right eye. Nothing simulating a fit since admitted. Extremities somewhat emaciated; muscles soft and flabby.

Examination.—Sternum prominent; chest, grey-hound in shape (rachitic); ribs flattened laterally, intercostal spaces small; expansion deficient; percussion and other physical signs normal; heart negative; pulse 100; respirations normal; tem-

perature 98½° ; liver and spleen, area of dulness normal ; urine, specific gravity 1020, color very light, acid, no albumen, deposit of mucus. Ordered Potass. Bromide grs. x every two hours.

May 25.—Patient much improved ; slept well : not rational yet ; remains quiet ; delirium disappeared ; pulse 80 ; temperature 98° ; hyperæsthetic condition absent ; tenderness over abdomen, especially epigastric area. Interviewed friends and found that patient had had several fits of an epileptic character on Friday, May 22, '85, but never had anything of a similar nature before. Had a paroxysm shortly before admittance to hospital. Family history found to be negative as regards nervous diseases. Has considerable difficulty in articulation ; thick and unsteady speech. Complains of inability to move tongue, as before attack. Right arm, motor power deficient ; sensation normal. Left arm and lower extremities examined and found to be in good condition.

May 26, 27.—Gradually improved ; mental condition fair ; no fits ; able to leave bed ; can walk all right, a little weak ; complete power over functions of rectum and bladder ; abdomen remains exceedingly tender ; no pains : bowels constipated ; pulse, respiration and temperature normal. Careful examination of heart reveals harsh first sound. Nothing in past history can be found to account for the seemingly epileptic state.

June 3.—Patient's gait very unsteady ; staggers and sometimes almost falls down, especially when turning round ; legs moved forward in a spastic state ; can stand with eyes closed and heels approximated ; great difficulty in walking backwards, in fact, performing any complex movement. Motor power in legs very much decreased, especially the right ; sensation deficient. Great difficulty in locating seat of irritation ; certain amount of analgesia ; reflexes, deep and superficial, increased. Ankle clonus (?), found to be physiological. Has tenderness and œdema over sacro-dorsal articulation. Never had any difficulty in walking before admission.

June 6.—No improvement. Eyes examined by Dr. Buller ; result negative.

June 6–13.—No improvement as regards walk. Condition of extremities remain unchanged. Complains of a severe pain

over hypogastric region, griping in character; suffered from this pain two weeks previous to admittance. Shooting pain up posterior part of both legs. Did not know patient's occupation at this time; but this constant abdominal tenderness and occasional griping, colicky pains, attended with constipation and indefinite nervous symptoms, directed attention to nature of occupation: immediately examined gums, and a most typical lead line was exposed to view. Believing all the symptoms due to lead poisoning, she was immediately given Potass. Iodide grs. x ter die.

June 13 *to July* 1.—A steady improvement has taken place in patient's gait, motor power, abdominal pains and tenderness; constipation remains to slight extent. Complains much of a coppery taste in mouth and great pain and tenderness over parotid region. Lead line very black, intense and extensive.

July 14.—Remained in hospital up to date. Improvement continues. Can walk without the least difficulty. Staggers little when turning round. Coppery taste in mouth. Still taking the iodide, and on a fair road to complete recovery.

CASE V.—*Plumbism—Source Unknown—Severe Colic.*

P. G., aged 52, sailor, sought admission into the hospital on 1st of June, 1885, complaining of pain over lower part of abdomen, griping in character and occurring in paroxysms, loss of flesh and obstipation. Has had several attacks of intermittent fever, likewise of gonorrhœa, the latter leaving a stricture easily dilated; patient using a No. 6 gum elastic catheter. Intemperate for many years past. Present attack commenced $2\frac{1}{2}$ months ago with pain over hypogastric region, griping in character; relieved by pressure. Constipation of a severe type, requiring purgatives *ad libitum*. For instance, on one occasion, he took the following: a bottle of castor oil, a box of purgative pills, three doses of salts, and, to make sure of success, took the fourth dose of salts,—and, to use his own words, "it made him run." Has been losing flesh since March last—40 pounds. On admission a strong, seemingly healthy, well-developed Frenchman: complexion dark brown, simulating a

semi-icteroid condition; muscles soft, somewhat emaciated; tongue slightly coated and cracked, appetite diminished, no vomiting, bowels constipated; complains of this lower abdominal pain, griping in character, partially relieved by pressure; function of bladder normal, micturition not frequent; heart and lungs examined and found to be quite normal; pulse 72; respiration, 20; temperature, 98°; does not sleep well; no headache; partial loss of vision. Examination of eyes—Soft cataract, dark pigmentation of choroid; otherwise normal, Abdomen—No distentson; palpation negative; no tenderness, with exception of hypogastric origin; liver extends one inch below costal margin. Urine, 1015 specific gravity; color light; deposit of lithates and phosphates; no albumen or sugar. With the above history and symptoms unable to come to a positive diagnosis Treated the constipation, Haustus Niger ℥ iii at night; result good.

June 2.—Patient re-examined. Further consideration of the case suggested possible lead-poisoning. The gums being examined a deep, well-marked lead line was found in the usual situation. This fact, added to the symptoms already detailed, seemed conclusive. He was therefore given Potass. Iodide gr. x ter die., with a daily dose of Mist. Alba to relieve the constipation. 11*th.*—Left hospital to-day. Pain has been absent for past four days; bowels regular; weight when admitted, 165 lbs.; exit weight, 170 lbs.; general condition good.

Reviews and Notices of Books.

Comparative Anatomy and Physiology.—by F. Jeffrey Bell, M.A. Philadelphia: Lea Brothers & Co.

This is one of the series of manuals for students of medicine published by Cassels & Co. in England and Lea Brothers & Co. in America. As the title implies, it treats of both Comparative Anatomy and Physiology, the time not having yet arrived, as the author says, for the advent of a work on Comparative Physiology alone. The author has devoted his attention chiefly to such details of structure as have been fully substantiated by

experimental inquiry. The work is a description of organs rather than groups of animals, the more simple form of an organ being first described, and then the more complex, in this way showing that there has been an evolution of organs as well as of animals. After an introductory chapter, and one on Amœba, a description of the general structure of animals is given, and is followed by chapters devoted to the various organs, as of digestion, respiration, movement, reproduction, etc. Of course, in a small work of this kind, only a very short account can be given of the various parts of different groups of animals, but it will be useful to students going up for examination and those wishing to get a general view of the subject. The field is so extensive that it is useless to attempt to cover the whole ground in a work of one volume, but the author is to be congratulated on the way he has accomplished his task. The book is well printed and profusely illustrated.

Diseases of the Tongue.—By Henry T. Butlin, F.R.C.S. Philadelphia: Lea Brothers & Co.

This, also, is one of the Cassels series of manuals published by Lea Brothers & Co. of Philadelphia. The author, Mr. Butlin, is already well known in connection not only with diseases of the tongue, but for his work on "Sarcoma and Carcinoma." When it was announced that he was to be the author of a manual on Diseases of the Tongue, it was felt that the task could not have been given into more competent hands. The work now before us, which is the result of years of experience and observation, fulfils all expectations, and is very complete. Every disease, accident and congenital defect to which the tongue is subject is ably described, and the treatment and operations for relief clearly and fully given. Over 100 pages are devoted to cancer of the tongue and its treatment. The various operations for removal of the tongue are noticed, and there are excellent chapters on the after-treatment and choice of operation. The author shows that the method of operating exercises infinitely less influence on the result than the after-treatment of the case. In uncomplicated cases he advocates extirpation of the tongue by

Baker's or Whitehead's methods, and in cases complicated with affections of the glands, Kocher's and Regnoli's methods or Billroth's modifications. In these latter methods the glands are removed through a separate incision in the neck, through which incision also the lingual only may at the same time be ligatured. Kocher, in addition, performs a preliminary tracheotomy. Mr. Butlin holds that preliminary ligature of the lingual does not in the smallest degree increase the danger of the operation. Billroth's method of after-treatment with iodoform gauze, as described by Wölfler, is strongly recommended. The only case, however, that the author treated in this way died of septic pneumonia. The 17 cases treated in Billroth's wards with iodoform gauze all recovered without any bad symptoms. We can heartily recommend this book to all practitioners desiring to know something about diseases of the tongue. It will prove as valuable to the physician as the surgeon. The book is well got up, and illustrated with engravings and chromo-lithographs.

A System of Practical Medicine by American Authors.—Edited by William Pepper, A.M., M.D., Provost and Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania; assisted by Louis Starr, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. Vol. II. Philadelphia: Lea Bros. & Co.

The second volume of Pepper's System of Medicine forms a very handsome book of over 1300 pages, and in point of quality it continues in every way to deserve the high enconiums which have been passed upon its predecessor. In it the "General Diseases" are concluded by a description of those arising "from derangements of the normal processes of nutrition, viz., Rheumatism, Gout, Rachitis, Scurvy, Purpura, Diabetes Mellitus, Scrofula and Hereditary Syphilis." And this section is followed by the whole of the "Diseases of the Digestive System." The first article is on Rheumatism, including acute articular, subacute and chronic, muscular, gonorrhœal and rheumatoid arthritis, and is contributed by Dr. R. P. Howard of Montreal. It

covers the whole ground of this always interesting subject, gives all the most modern views of the pathology and causation, and furnishes copious references of great use to the earnest student for further research. The treatment of the various forms is fully dwelt on, and the more successful methods supported by the published reports of the most recent writers. On glancing over the list of the articles furnished it will at once be seen that the most capable men in the country have been at work upon them. To select only a few from the many, Rickets receives full attention at the hands of Dr. Jacobi ; Diabetes Mellitus has fallen to Dr. Tyson, who has already written a monograph on the same subject ; Dr. Solis Cohen contributes the space allotted to Affections of the Mouth, Tongue, Tonsils, Pharynx and Œsophagus ; Dr. J. Lewis Smith writes on Intestinal affections of Children in hot weather ; Dr. Hunter McGuire on Intestinal Obstruction ; Dr. Roberts Bartholow on Diseases of the Liver ; and Dr. Alonzo Clarke on Peritonitis. It is but right to say that in every case each author would seem to have been determined to do full justice to the task set before him, so that when this work is complete, it will surely be looked upon as the standard and best exposition of the present state of the practice of medicine in America. The chief virtue of an index generally lies in its fulness ; in this case perhaps the compiler has pushed this idea to an extreme degree, for it covers in itself over 100 pages !

The Inhalation Treatment of Diseases of the Organs of Respiration, including Consumption.—By A. Hill Hassall, M.D., Lond., M.R.C.P., Eng., Founder of, and Consulting Physician to, the Royal National Hospital for Consumption and Diseases of the Chest, &c. With numerous illustrations. London : Longmans, Green & Co.

Of late years, renewed interest is being taken in the subject of the treatment of various affections of the lungs and air-passages by the direct introduction of medicaments through inhalation. The discovery of the bacillus of tuberculosis as a constant element in phthisical sputa and the good results following thorough antiseptic methods is sufficient to account for this.

There can be no doubt, therefore, that this exposition by an expert of his experience, with various applications of these principles, will be widely read. For it is well known that Dr. Hassall has for many years devoted great attention to the subject of pulmonary diseases, and has written several works upon the health resorts of Southern Europe. After considering the principles concerned in the volatilization and inhalation of medicaments, he discusses and describes the various forms of apparatus employed in diseases of the organs of respiration. The details of these are fully given, and numerous cuts are introduced to illustrate all those which have been found practically useful. This is followed by an interesting chapter upon "Inhalation Chambers." We then find a very full list of the various drugs, etc., which are employed for inhalation purposes, together with directions as to the quantities to be used, and the manner, frequency and duration of the inhalations. The whole is concluded by taking up *seriatim* the various diseases of the organs of respiration, and pointing out the best local treatment for each. No one can peruse this book without acquiring much useful knowledge, and feeling that, in neglecting this method of treatment, he is failing to arm himself with one of the most effectual weapons against a number of formidable enemies.

A Practical Treatise on Urinary and Renal Diseases, including urinary deposits. Illustrated by numerous cases and engravings.—By Wm. Roberts, M.D., F.R.S., F.R.C.P., Lond., Professor of Medicine at the Victoria University, &c.; assisted by Robt. Maguire, M.D., Lond., M.R.C.P., Lond., Physician to Out-patients, St. Mary's Hospital, Lond., &c. Fourth edition. Philadelphia: Lea Brothers & Co.

This well-known standard English work is now presented to the reading medical public in a considerably enlarged and otherwise much improved edition. Its first part is devoted to the physical and chemical properties of the urine, and to the various alterations which it undergoes under different circumstances of health and disease, in so far, and only in so far, as they seem

to have a practical bearing. The second treats of a group of affections which are often with propriety classed as "urinary diseases," viz., diabetes insipidus, diabetes mellitus, gravel and calculus, and chylous urine. The third is taken up with the organic diseases of the kidney, and constitutes the largest part of the work. Here, Bright's disease in its various forms is, as we should expect, treated of very fully. Complete, but shorter descriptions of all the other important affections of these organs are also to be found. Much new matter, as compared with the former editions, will be found in the chapters on albuminuria, on micro-organisms in the urine, etc., the latest observations on these important subjects being incorporated in the text. We know of hardly any work on urinary disorders more generally useful to the advanced student or to the practitioner for purposes of reference.

Berlin as a Medical Centre: a Guide for American Practitioners and Students.—By HORATIO R. BIGELOW, M.D. Sandy Hook, Conn.: New England Publishing Co.

This little work consists of a reprinted series of letters addressed from Berlin to the *New England Medical Monthly*. So many physicians and students from this side of the Atlantic avail themselves of the superior educational advantages of this great medical centre, that any assistance afforded them in the way of preliminary information will no doubt be received with gratitude. As the author says, probably with great truth, "very few professional men have ever gotten themselves into a good working routine, in Berlin, before spending a month or more in finding out about the courses they wish to take." It is, therefore, his main object to put all such in the way of avoiding this useless expenditure of time. He details the cost of travelling there with the routes which are preferable, gives lists of suitable hotels, restaurants and *pensions*, with the prices charged. Then follow well-arranged tables of all the principal lectures and clinics by the various professors and teachers. A number of other minor subjects also come in for a share of notice. If one were inclined

to criticize, perhaps exception might be taken to the minute directions given to intending travellers as to their requirements during the ocean voyage. They are informed that "a good travelling rug will be found of very general utility"—"a thick overcoat, gloves, and a slouch hat are never out of place"—"bromide of potassium is about the only satisfactory medicine that I know of in sea-sickness, and (alas! that it should require to be said) this often fails." This is twaddle, and would have been better away. Every one thinking of visiting medical Berlin will find it well worth his while to have a copy of Dr. Bigelow's letters.

A Practical Treatise on Massage; its History, Mode of Application, Effects, Indications and Contra-indications.—By Douglas Graham, M.D., Fellow of of the Massachusetts Medical Society. New York: Wm. Wood & Co.

This work is a good illustration of how much can be written on a small subject. It contains nearly 300 pages. It is, in our opinion, an unfortunate circumstance that the author should not have condensed all he had to say in 100 pages, for in that space we feel confident he could have easily said all that any medical practitioner would be benefited by knowing on massage. As it is, the reader has to wade through a large amount of padding; and, further, subjects which have no direct connection with massage are dealt with. The clinical history and pathology of neuralgia, writer's cramp and rheumatoid arthritis are dealt with in an unnecessary length in a work which pretends to deal with massage solely. Thirty-one pages are devoted to the history of massage during the past 3,000 years—from the time that Homer in his Odyssey "tells us that beautiful women rubbed and anointed war-worn heroes to rest and refresh them"—from the time that "the Sicilian handmaid bathed high-hearted Laertes and anointed him with olive oil, and cast a fair mantle about him." Very full descriptions are given of the best methods of applying massage, and an attempt is made to give a physiological explanation of the good results obtainable by this means.

One of the best chapters in the book is on the treatment of the neurasthenia and anæmia of women. It is in this condition that massage, combined with rest and over-feeding, has done so much, especially in the hands of Weir Mitchell and Playfair, in curing apparently helplessly bed-ridden patients. The author cautions his readers not to expect a cure in all these cases, and he points out those that are likely to be benefited and those that are not.

After devoting a long chapter to the use of massage in affections of the central nervous system, the treatment of neuralgia and of peripheral paralysis are dealt with. Considering the otherwise encyclopædic character of the work, we were disappointed in finding so little said about the treatment of peripheral paralysis by this means. A word or two is said about a case of facial paralysis of several months' duration, arising from exposure to cold, that soon got well from massage. No mention is made of the electrical condition of the paralyzed muscles. In the absence of this evidence, the alleged cure by massage is of little worth, for it is an every-day observation that the milder forms of facial paralysis are soon recovered from without any aid.

There is an interesting chapter on massage in joint affections, including a biographical notice of Dal Cin, the notorious Italian "bone-setter" quack. The author has some sensible words concluding this chapter, which we quote: "The less people know, the greater is their faith, and hence the greater is their enthusiasm, which is so necessary to convince and carry along others. The most learned people outside of medicine are the most easily gulled, because they presume to know what they do not, and one assertion is as good as another with them. Child-like simplicity, good-natured enthusiasm, and unbounded sympathy are the three pre-requisites of a successful *magnetizer* or *bone-setter*, and the mysteriousness of their doings making a deep impression on their patrons, all other attributes are added to them. What is testimony worth under such circumstances."

Books and Pamphlets Received.

SECOND REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF TENNESSEE. Nashville: Albert B. Tavel.

A PRACTICAL TREATISE ON DISEASES OF THE KIDNEYS AND URINARY DERANGEMENTS. By Charles Henry Ralfe, M.A., M.D. (Cantab). With illustrations. London: H. K. Lewis.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, June 26th, 1885.

T. J. Alloway, M.D., 1st Vice-President, in the Chair.

Case of Extra-uterine Fœtation treated by Electricity.—Dr. Gardner read a paper on this case, which appeared in the August number of this Journal.

Discussion.—Dr. Shepherd said when he saw the case there were evidences of septic trouble. Tait says all these cases are tubal at first; he cuts down and removes the fœtus.

Dr. Hy. Howard said he had only seen one case of extra-uterine fœtation; it came to full term. The tumor was aspirated, followed in 24 hours by peritonitis, convulsions and death.

Dr. Wilkins asked how the electricity caused the death of the fœtus; was it by exciting strong contractions of the muscular structures of the Fallopian tubes?

Dr. Kennedy said that he had seen two cases of extra-uterine fœtation. One of these had been reported to the Society some years ago. In this case the woman came to him about the fifth or sixth month to engage his services. Her appearance was normal, and she felt quite well. At the end of nine months he was sent for, as symptoms of labor had set in; on examination of the uterus, found it empty and the actual condition diagnosed. The case was explained to the patient and operation suggested, but she and her friends positively refused such assistance. The movements of the fœtus were quite lively up to this time, but ceased in a few days, and in a short time after, septic fever setting in, she was sent to the General Hospital. In the hospital she passed per rectum several fœtal bones, sloughing having taken place between the sac and adjacent bowel. This patient died from septic poisoning, and the post-mortem confirmed the diagnosis previously made. The second case came under his notice eighteen months ago. He was asked to see in consultation a patient supposed to have pelvic cellulitis. After examining her, he coincided with the family doctor in this opinion, but

on a subsequent consultation he had come to the conclusion that the case was one of extra uterine fœtation. Afterwards, during the absence of his *confrère*, he took charge of the case. The patient had been married before, and had two children by her first husband. The present husband was a strong, big man, with whom intercourse was generally painful. Previous to her illness she had thought herself pregnant, but the menstrual discharge had continued, somewhat altered from the usual flow when about 3½ months in gestation, and while dusting down the stairs, she was seized with a sudden severe pain in the abdomen, which almost caused her to faint. She was prescribed opiates and rest, and after a few days was up again. About ten days after, she had a second attack, and later a third. The last seizure was accompanied with a profuse flow and discharge of a membrane resembling the decidua. Abortion was supposed to have occurred, followed by pelvic inflammation. Although pelvic cellulitis was diagnosed, Dr. Kennedy has now no doubt that the primary condition was one of extra-uterine fœtation; the character of the seizure and the subsequent symptoms being such as are observed in tubal pregnancy. Fortunately, death of the fœtus no doubt ensued, and the subsequent inflammation had encysted its remains. This patient was a long time ill, but afterwards recovered. A tumor yet remains on the right side, and coitus is still painful.

Dr. Trenholme had met with one well marked case where the fœtus perished before its movements were felt. The patient becoming free from symptoms, went to the seaside, where she passed several small bones per rectum. There remained indications of induration. She has been in perfect health ever since. Another case he was called to see, where the fœtus was as the sixth month. On examining the uterus, it measured 7 or 8 inches, was empty, but on the left side he found a bulging, and thought the case to be one of tubo-uterine fœtation. He scraped over the bulged wall with a curette, and in 24 or 36 hours this was followed by expulsion of the fœtus. He thinks the electricity kills from shock, not from exciting muscular contraction, as most likely the first seizure corresponded with the rupture of the tube, allowing the contents of the sac to fall into the abdomen, where there would be no muscles constricting it.

Dr. Alloway said he had read of a woman dying at the age of 75, and in whose abdomen fœtal bones were found at the post-mortem examination. When 22 years of age she had had symptoms of extra-uterine pregnancy.

Dr. Gardner said that Tait found by examination that all cases were first tubal. Tait confines his operations to cases where rupture has occurred. Electricity is safe and simple to use. In this case electricity might have been used earlier. The electricity kills by shock to the child's heart. Most cases are right-sided. He believed there was not much doubt but that Dr. Kennedy's second case was one of extra-uterine pregnancy.

Dr. Gurd mentioned that their patient was doing well, being able now to take short walks.

Dr. Cameron asked if menstruation in this case had been abnormal. He had a case eight years ago where the woman suffered greatly at each period as if from inflammation of the Fallopian tubes. Might not these cases be caused by narrowing of the tube by contraction?

Dr. Gardner said this explanation was a feasible one.

Dr. Trenholme said that a cellulitis with contracting bands might destroy the patency of the tube.

Dr. Wilkins said that a chronic diseased condition might destroy the cilia of the mucous membrane of the tube, and so account for the fructified ovaries not being sent down into the uterus.

Gynæcology.—Dr. Lapthorn Smith read a short paper entitled "Notes on Gynæcology," being some observations made during a month's visit to the Women's Hospitals of New York. He began by referring to the great frequency with which the major gynæcological operations are performed, a frequency, however, which seemed to be generally justified by the results. Ovariotomies and hysterectomies were of daily occurrence, those of them which took place at the Woman's Hospital being performed in detached cottages, under the most perfect sanitary conditions. He thought that they were sometimes done in the face of fearful odds against success, the consequence being that the death rate was rather high. He spoke of the skill and cool-

ness of the operators, and the splendid training of the assistants and nurses. Although the operations were not done antiseptically in the strictest sense, yet every precaution was taken to insure cleanliness. Dr. Hunter takes especial care not to allow a single drop of blood to enter the peritoneal cavity when performing hysterectomy; the peritoneum not being opened until all bleeding from the incision in the abdominal wall had been arrested. When the uterine tumor has been drawn through the opening, it is immediately wrapped in a carbolized towel, in which it is held, and the edges of the wound are enfolded in warm carbolized towels. Ether was the only anæsthetic used. The operations for lacerated cervix and lacerated perineum are performed with still greater frequency; the former being done not only for the purpose of closing the rent, but still more often as a rapid method of removing the hypertrophy and inflammatory exudation of subinvolution. The operator made it a rule to be satisfied with nothing short of the complete removal of the cysts formed by the diseased nabothian glands, digging down and removing indurated tissue almost as far as the internal os. The needles used were short, round, and slightly curved, having one surface ground flat near the point; and for sutures, a No. 26 pure silver wire attached to the end of a plaited silk thread was generally employed. The operation for lacerated perineum is also very frequently done; in many cases for the cure of rectocele and displacements of the uterus. The reader stated that he frequently met with cases of prolapsus uteri in his practice, in which the vulva was so large that no from of ring pessary could be retained; all such cases were suitable for operating. He also remarked that in these two operations the scissors and tenaculum have completely taken the place of the knife and forceps. Two other instruments which he found in general use were the Wylie dilator and the Thomas' blunt curette, their advantages and immunity from danger he set forth at some length; nevertheless, it is better to keep the patient anæsthetized. The reader then related the various uses to which the tamponnade of the vagina or columning is put to, and stated that it has very largely taken the place of solid pessaries, especially where there

is an inflammation in or about the displaced organ. He stated that the introduction of cotton tampons soaked in glycerine or glycerine of tannin and the use of the hot-water douche have marked a new era in the treatment of pelvic cellulitis, subinvolution of the uterus, and other inflammatory affections of the generative organs. He concluded by describing a case under Emmet's care, in which that distinguished operator had intentionally made a vesico-vaginal fistula for the cure of chronic cystitis which had been otherwise intractable. After three or four months the cystitis was cured, and he closed the fistula without much difficulty.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Pent-up Secretions.—Mr. Wheelhouse illustrates a most interesting lecture on the subject of "pent-up secretions" by typical cases showing the way in which most distressing symptoms may sometimes be relieved, if it be discovered that some secretion is pent up, and this secretion be evacuated. The case of a young gentleman is narrated, to whom the author was called, and found on the point of suffocation. On physical examination it was discovered that the left pleura was full of fluid. A Roberts's trocar was thrust into the side, and six pints of clear fluid were withdrawn, giving instant relief. Another time, Dr. Clifford Allbutt called the author to a case of acute rheumatic fever. The patient was dying from acute pericardial effusion; a small trocar and canula was thrust along the upper margin of the fourth left rib, the serum was drawn off, and the patient soon recovered. A third case is given in outline, where a young lady of wealth, living in a mansion surrounded by everything conducive to health, yet constantly suffered from what was supposed to be well-marked blood-poisoning. At length the patient's regular medical attendant decided to enquire fully into the question of the "periods," and on examining a diaper found that there was only a small amount of "fœtid" discharge upon it. A second

opinion was obtained, and an examination, under ether, was insisted upon. It was then found that the patient had a hymen so nearly perfect, that only a tiny aperture existed to permit the exit of the natural excretion. On freely dividing the membrane, the vagina was found converted into a distended sac, its walls being granular and over-vascular, thus presenting a very large absorbing surface. A few months sufficed to make a complete and perfect cure of all her troubles. The most remarkable advance made in the treatment of cases of phthisis is the method of opening phthisical cavities through the back, and draining them by means of drainage-tubes, thus relieving the cough and fœtid expectoration.—*British Medical Journal*, January, 1885.

The Treatment of Fever as a Symptom.—While the chief object of all medical treatment is necessarily to eradicate disease by attacking its very beginnings, there are times in which the relief of a pressing symptom may constitute the first important step towards recovery. Fever is such a symptom. How often does one find that, even in the presence of an active morbid cause, the mere remission of temperature for a certain period assists the physician, by obtaining rest for his patient, by gaining time, by quieting irritability in the neighborhood of a source of mischief, and so converting an acute into a subacute or chronic process. These effects appear in many diseases which are said to run an unvarying course—in typhoid fever and early tuberculosis, for example; and there are good physiological reasons why the abatement of fever in itself should materially aid and tide over other efforts of nature or of art, which are designed to cut the root of unhealthy action. It becomes, therefore, a matter of interest to enquire in what way a fall of temperature can thus react upon the local processes which determine the course of fever, and that fever does not depend on local causes may probably be accepted as an axiom. All its features tend to show that it is a nervous disorder which acts along the lines of the vaso-motor system, that its method is reflex, and its results a

destructive metabolism, which reveals itself in general emaciation, and is most intense at the original seats of morbid irritation. The aim of antipyretic measures must therefore be to allay this nervous overwork by opposing a buffer to the repeated shocks of peripheral stimuli, and this may clearly be accomplished in more ways than one. Thus it is frequently possible, by using narcotics, to lull the excited cerebro-spinal centres generally, and so to weaken their response to provocation. By another agency the constricting influence of the vaso-motor centre may be specially and directly inhibited and the circulatory system proportionately eased, as would seem to be the case when salicylates are employed. In this case, also, the harassed nervous centres share the general rest. The heat-regulating mechanism, too, if it exist as a separate factor, may be restrained by similar means, when its disordered forces would otherwise result in riotous excess of tissue change. In any case, the reduction of fever, beside preventing general loss of power and substance by wasteful molecular action, is directly beneficial in another way. By depleting areas which border on the causal irritant or its habitat, and the intense congestion of which magnifies the force of stimulation, it must react as a sedative at the very source of disease. These observations suffice to show why antipyretics possess a real value even in such diseases as continuous fevers. Apart from the aid they render to the further resources of medical skill, and apart from their action on septic germs, they often appear, by the rest which they procure alone, to constitute the chief element in the cure of febrile disease.—*Lancet*, June 6, 1885.

Pyridine.—M. Germain Sée, in a communication to the Académie des Sciences on pyridine, states that neither subcutaneous injections of pyridine salts, nor smoking cigarettes of pure pyridine, offered the same advantages in asthma as the practice of administering it by inhalation. Four or five grammes are poured on to a plate, which is placed in a closed room containing rather less than twenty-five cubic metres of air. The patient, in the room, breathes the air impregnated with pyri-

dine. This treatment should be repeated, for about twenty minutes, three times a day. Pyridine can be traced in the urine almost immediately after the commencement of an inhalation. According to Dr. Germain Sée, hypodermic injection and pyridine cigarettes provoke nervous disturbance. Inhalation produces a beneficial effect; the feeling of oppression common among asthmatic patients being relieved, breathing becomes easier, and they have no longer the characteristic intense longing for fresh air. The sensibility of the pneumogastric nerve and the excitability of the medulla are considerably diminished, and the heart's action becomes normal. It frequently happens that the patients fall asleep after the inhalations. This sleep is almost normal, and is not accompanied by profound insensibility, and is therefore different from that provoked by anæsthetics. While it lasts, sensations, followed by reflex phenomena, are provoked with difficulty, although contractile energy is maintained. The administration of pyridine is not followed either by paralysis, convulsions or tremors; but the muscles are relaxed and temporarily lose their tonicity in consequence of the lessened sensibility of the medulla oblongata and spinal cord. This modification of the reflex sensibility is the especial characteristic of pyridine, as distinguished from substances like nicotine and atropine.

All the patients to whom Dr. Sée administered pyridine had quiet nights, though previously tormented with violent fits of coughing and intense oppression. The physical pulmonary symptoms all showed improvements. Pyridine does not affect the general health. When the suffocating asthmatic fits reappear after inhalations for nine or ten days, Dr. Sée recommends the administration of iodides. He has treated fourteen patients, nine of whom were asthmatic and five subject to cardiac diseases; they were all relieved. One patient had suffered from asthma for twelve years; he was greatly relieved by the treatment with pyridine, but it was discontinued in consequence of troublesome attacks of vertigo and sickness. The asthmatic patients who presented cardiac and renal complications, declared that respiration was much eased by the inhala-

tions. Dr. Sée concludes that pyridine is preferable to hypodermic injections of morphia, its action being preferable and less dangerous.—*Paris Correspondence of British Medical Journal.*

Removal of a Calculus from the Vermiform Appendix FOR THE RELIEF OF RECURRENT TYPHLITIS.—At a recent meeting of the Clinical Society of London (*Medical Press*, May 13, 1885), Dr. Symonds read the history of a case in which, at the suggestion of the late Dr. Mahomed, he had removed a calculus from the vermiform appendix for the relief of recurrent typhlitis. A basket-maker, aged twenty-three, was admitted to Guy's Hospital July 16, 1883. Six months previously he was seized during the night with pain in the right iliac region; this increased in severity and he became ill generally, and at the end of a week was unconscious, remaining in this state four days. The illness lasted seven weeks. During the first week he vomited everything, and his bowels were not opened for ten days. During the whole time there was great tenderness in the right iliac fossa. During the first part of his illness he was under the care of the parish, and for the last two weeks was in the Camberwell Infirmary, where he was told he had typhlitis. Soon after this, on getting about, he noticed a hard lump in the right groin about the size of a walnut; sometimes this swelling was painless, at other times it was very tender. Since this illness he has had repeated attacks of pain in the right iliac fossa, which come on suddenly, and last one or two days. The pain is relieved by poultices. At first these attacks recurred about once a month, but during the last five weeks he has had six attacks, and they have been increasing in severity. One of the attacks having been observed in the hospital, it was proposed that the cæcal region should be approached by an incision in the right iliac region. Dr. Mahomed was of the opinion that there existed an abscess cavity containing probably a calculus or concretion, and that the periodical occlusion of a communication with the cæcum determined the recurrence of pain. It was finally decided to

cut down upon the small hard lump which was to be felt in the right groin on deep palpation. On August 24th chloroform was administered, and under the carbolic spray an incision was made, commencing two inches above and one inch internal to the anterior superior iliac spine, and curving downward and forward for about four inches, being much the same as that used in ligature of the external iliac, and so arranged that its centre corresponded with the position of the lump. The various structures were divided, but the transverse fascia was not distinctly recognized, owing possibly to the incision being rather near the iliac spine. The structures in front were now raised out of the iliac fossa, when the lump could be plainly felt from behind, and as yet the peritoneal cavity had not been opened. A hand pressed deeply from the front steadied the swelling, and brought it more into the wound. A vertical incision was now made over the hard lump, and a small calculus exposed. Before removing it a fine silk suture was passed through the tissues just above, so that the orifice might not be lost. The opening was then enlarged, and the calculus removed. The soft and purple mucous membrane of the appendix was seen, and its tortuous course from the aperture could be traced upward toward the cæcum, so that there seemed no doubt of the canal having opened. Exploration of the cavity with a probe failed to detect a channel leading toward the cæcum. No pus or other fluid was found round the calculus, nor was there any fecal or unpleasant odor. The opening into the appendix was closed by Lembert's and the wound by deep silk sutures. The peritoneum was not opened, so far as could be determined, and this was attributed to the adhesions that had probably taken place at the time of the first attack, and to the method adopted in reaching the appendix. The usual gauze dressings were used. The calculus was oval in shape, smooth on the surface, and measured three-fourths of an inch long, and rather more than one-half of an inch wide. On section it showed a laminated calcareous capsule enclosing hardened fecal matter. The patient made a somewhat protracted but complete recovery, and in April, 1885, although an

inmate of a lunatic asylum, it was learned that he had never had any bowel trouble since November, 1883. In his remarks on this case, Dr. Symonds points out that this is the first case in which a concretion or calculus has been removed from the appendix vermiformis without, at the same time, the opening of an abscess. He says also that the credit of the procedure must be given to Dr. Mahomed, at whose suggestion the operation was undertaken.

Transmission of Syphilis by the Hebraic Rite of Circumcision.—Dr. A Kedotoff cites three cases of this character, in the first two of which mother and child both suffered from the infection. This operation has been so frequently described as to make it unnecessary to repeat it here, except to say that after the foreskin has been removed the wound is sucked by an assistant. It is certain that if the psylle be syphilitic, the chances are very great for the contamination of the child, recognizing the frequency of buccal chancres.

In the three cases cited there was no question of hereditary syphilis, because in the first two the fathers were carefully examined, and showed no traces of the disease, and the other children were exempt. In the first two there were traces of the primary sore on the penis. If the hereditary influence be admitted, it is difficult to understand how the children could so infect their mothers. The operator being examined, was found to be perfectly healthy. The psylle (or the assistant whose business it was to suck the wounds) showed no blotches or cicatrices upon his body. The cervical, epitroclear and inguinal glands were slightly tumefied. No trace of syphilis on the genital organs or about the anus. But on the mucous membrane of the lower lip there was a curvilinear cicatrix passing to the gingival ridge, where there was a pearly spot, which was covered by the thickened, whitish, opaline epithelium. On the mucous membrane of the upper lip, there was a yellowish fissure, and on the gum opposite to it a little greyish spot, as if covered with false membrane, and which looked like a mucous

patch ; the tonsils were slightly injected. The psylle denied that he had had syphilis, and explained the presence of the cicatrix on the lip as due to a fall in childhood. One suspicious circumstance connected with the case was, that the operator presented himself for examination without hesitation, while the psylle refused to come until brought by the police. A month later he was examined by two other physicians, who confirmed the presence of these symptoms, but were doubtful as to their origin. Dr. Kedotoff considers that the psylle contracted the disease less than five years before, possibly in another way than by coitus, and that the affection showed itself in a slight, benign form, which manifested itself, from time to time, as mucous patches—the form most apt to transmit infection. Moreover, it is this form which most frequently escapes attention.—*Ann. de Dermatol et de Syphil.*, Vol. V., Nos. 9-10.—*Jour. Am. Med. Ass.*

Nervous Symptoms of Enteric Fever.—The following are the conclusions reached in an article by Dr. J. C. Wilson, published in *Medical Times* :—

1. The so-called typhoid condition (stupor, somnolence, hebetude, prostration) is dependent upon the alteration of the blood caused by the infecting principle. It may be said that the intensity of these symptoms is proportionate to the virulence of the infection.

2. Delirium (especially when violent) and agitation, in a word the ataxic phenomena, are produced by the same pathogenic principle. But their manner of development and their course are to a great degree influenced by the pyrexia. The fact, however, must not be overlooked that certain forms of delirium occurring in enteric fever are not dependent upon the elevation of the temperature.

3. Certain forms of delirium, especially delirium ceasing after free epistaxis, and certain muscular disorders, such as convulsions and contractures, must be ascribed to hyperæmia. Disturbances of sensation are likewise in many instances the result of congestion of the nervous centres.

4. Vertigo, delirium, etc., may also be due to anæmia, which plays an important part in the production of enfeeblement of the central nervous system. Collapse is very often due to abundant hemorrhages. Inanition, producing, as it does, a profound denutrition, is a cause of anæmia, and favors the collapse and marasmus, which are so often fatal.

In conclusion, whilst intense pyrexia is the cause of serious symptoms and grave complications, it is possible to assign to it a high position as a pathogenic factor. The dictum of Griesinger, "The fever in great part controls the situation,"—*Das Fieber beherrscht zu grossem Theil die Situation*—has exposed those who have accepted it to grave therapeutic errors. The nervous phenomena of enteric fever are produced by various causes which act sometimes together, sometimes separately. It is not easy to discover the predominant element in a pathogeny always complex, nor is it desirable to carry the analysis to an extreme. From a clinical standpoint, however, the subject is important, for the management of the nervous symptoms will be successful in proportion as their interpretation is exact.

Experimental Investigations concerning the causes of Diphtheria.—By Pintschorius of Ketzin (*Jahr. f. Kinder.*, B. XXII., Hft. 4, from *Allg. Med. Central Zeitung*).—For inoculation material the author used portions of the soil of a house in which there had been several cases of severe diphtheria. A hole was dug in the cellar, and into it was poured urine free from bacteria. After nine days a portion of the urine-infiltrated soil was removed, and with it was mingled fresh urine which was allowed to filter through it. After drying this mixture, some of it was rubbed upon the gums of chickens, which had been freshly abraded for this purpose. Diphtheritic patches resulted upon the surface of inoculation with severe febrile symptoms. False membranes were also formed in the trachea. Inoculation with the membranes thus formed resulted in the development of well-marked diphtheria. A similar result was obtained by the inoculation of membrane removed from diphtheritic children. The conclusion from these

experiments is that bacteria from soil which is impregnated with the products of putrefaction are the cause of diphtheria. The author also believes that it has been shown that the spores of fungi are held in ground air, and that they ascend in the walls of houses to the warmed spaces by means of the current of air which the heat produces. The spores are round, have sharp contours, and no nuclei.—*Archives of Pediatrics.*

External Use of Chloroform in Difficult Labor.—Dr. A. Svanberg recommends the external application of chloroform to the abdomen in cases where labor is delayed or obstetric manipulations prevented by uterine rigidity. By this means he has succeeded in turning, several hours after the escape of the waters, and also in removing retained placenta without resorting to the inhalation of an anæsthetic. He soaks a piece of flannel in equal parts of sweet oil and chloroform, and then places it on the abdomen between the symphisis and umbilicus, keeping it in close contact with the skin for about five minutes. If the case be a severe one, the flannel is to be soaked again and reapplied for a few minutes more ; at the end of about ten minutes the rigidity was always found to have disappeared, so that the necessary manipulations could be performed without any trouble. —*Chicago Medical Journal and Examiner.*

On the Surgical Treatment of Asthmatic Conditions.—Hack of Freiburg, speaking before the Medical Congress at Wiesbaden (April 11, '85), communicated his experience of nearly 600 cases of asthmatic conditions (*Beilage zum Centralb. f kl. M.*, No. 20, 1885). In all these cases a reflex neurosis could be found, either present or having existed some time previous. The nose was invariably the centre of the reflex irritation. In 81 cases in which nasal obstruction alone called for surgical interference, it became evident that, with the increase of chronic hyperplastic rhinitis, all neurotic conditions, especially asthma, in spite of long existence, had disappeared spontaneously. Hack holds that reflex neuroses may

originate whenever the nose is the seat of hyperplastic conditions. In cases where the mucous membrane alone is affected, the usual catarrhal treatment with astringents and stimulants ordinarily suffices to suppress the neurosis, while neuroses depending upon hyperplasia of the deeper cavernous structures invariably require surgical attendance—*i.e.*, destruction of the cavernous tissues.

Poisonings in 1883. — The Registrar-General's Report for 1883 has lately been published. This report concerns England and Wales only, and it appears tht the total number of deaths registered during 1883 reached 522,997 ; of these 639 are attributed to poison. Further classifying these it seems that 374 (239 males and 135 females) were due to accident or negligence ; 264 (163 males and 101 females) to suicide, and 1 (a male infant under one month old) to murder. Opium, or one of its preparations, is given as the agent in this case. Of the accidental deaths, 93 occurred to children under five years of age. Lucifer matches, water hemlock, and benzoline, each caused 3 deaths ; paraffin, poisonous herbs, vegetable poisons, poisonous fish, liniment, improper food, oil of juniper, medicine (kind not stated), yew, poisonous berries, each caused 2 deaths . iodine, tartaric acid, Woodward's gripe-water, drugs to procure abortion, green paint, diseased meat, cayenne pepper, syrup of rhubarb (!), croton oil, nitre balls, copper, hydrate of tin (tinned salmon) and mushrooms caused 1 death each,—all classed as accidental. For suicides, the following poisons were also selected, one each : Chloride of zinc, atropine, bichloride of iron, bichromate of potash, lime, and salts of lemon. There are several comments which might be made on these statistics, but the most noticeable fact of all appears to us to be the high high place in the table taken by carbolic acid.— *Chemist and Druggist.*

The Intravenous Injection of Milk.— Having recently injected milk into the veins of a person about to die, who survived for some hours after the operation, and believing that this therapeutic measure is one of great value as a substitute for the transfusion of blood, Mr. Charles E. Jennings

(*Brit. Med. Journal*, June 6, 1885) has made a careful study of the subject, from which physiological, experimental, and clinical evidence combined he has drawn the following conclusions:

1. The intravenous injection of a small quantity of newly-drawn milk is harmless.

2. Large injections of milk are fatal, with polyuria as the chief symptom.

3. The employment of impure or stale milk is most dangerous, on the probability that septicæmia will follow the operation.

4. The operation is to be recommended in the later stages of cholera, enteric fever, phthisis, and pernicious anæmia, as a substitute for the transfusion of blood; and, in short, in all cases where transfusion of blood is indicated on nutritive grounds, but where a blood-donor cannot be procured, or where this operation is, for other reasons, impracticable.—*Therapeutic Gazette.*

Cod-Liver Oil and Lime Water in Scalded Throat.—A child, aged 3 years, scalded the throat severely in attempting to drink from the spout of a boiling tea-kettle. When seen a few hours later she was in a state of collapse, and the tissues about the mouth greatly swelled. Equal parts of lime-water and cod-liver oil were given in tea-spoonful doses every hour. It was found to act beneficially by its local effects, and also served as nutriment for the child. In three days there was great improvement, consciousness returned, and in a week the distressing dyspnœa, which had threatened life, passed away. Milk was gradually added to the oil and lime water, and the case recovered completely.—*Lond. Practitioner.*

Reunion of Separated Members. — Dr. Klein, of the Austrian army, reports two cases of perfect reunion after separation of members, which clearly demonstrate that the preservation of separated members in alcohol is not the sole office of the surgeon in such accidents. Both cases referred to self-inflicted amputation of fingers to avoid military service. In one case union resulted in 22 days; in the other, where the finger was only found half an hour after the amputation, the cold and blue member grew warm on the second day, and had re-established its former relations completely within six weeks. Iodoform gauze was used in both cases.—*Wien. Med. Woch.: Therapeutic Gazette.*

CANADA

Medical and Surgical Journal.

MONTREAL, SEPT., 1885.

REPORTING CONTAGIOUS DISEASE.

In view of the increasing prevalence of smallpox in this city, the health authorities determined to bring before the courts some case coming under their notice in which a physician should have failed to report the address of a smallpox patient under his care. On the 7th of August. Dr. Jacques was summoned to appear before the Recorder, charged with the above offence. The action was taken under section 37 of the City By-law 105 as follows: "All doctors practising within the city limits are required to report within 24 hours all cases of smallpox, typhoid fever, diphtheria, or any other contagious disease which may come under their notice, and give notice to the Health Department of the name of the person, the number of the house, and name of the street where the disease exists." The facts were admitted, but the accused pleaded that, notwithstanding knowledge of the by-law, he had considered any such attendance a professional secret, that it was privileged, and that he should not be bound to divulge the nature of any patient's illness. The oath taken at graduation was invoked to support this view of the case. His Honor the Recorder, in delivering judgment, declared that the Provincial Legislature, which enacted the above clause, had full power to do so, and that, as long as it stood upon the statute-book, all were bound to obey it. The Hippocratic oath he could not believe to cover the case in question, for the obligation to professional secrecy contained the proviso, "*non sine gravi causâ*"; and, the grave cause—the urgent reason—here lay in the existence of a rapidly-spreading contagious disease in our

midst. On these grounds, Dr. Jacques was pronounced guilty under the by-law, but in view of its being the first conviction, and that the doctor was believed to have acted in good faith, sentence was suspended.

It is clear that the Board of Health are determined to enforce this provision for the reporting of smallpox, and our city physicians, to avoid trouble, must govern themselves accordingly. When the by-law was before Parliament, it was discussed at the Medico-Chirurgical Society, and many objections were urged against it—several of the oldest and most influential members declaring that they would never consent to abide by it. The objections to it are sufficiently obvious; it is very distasteful to medical men to feel that they are called upon to act the spy, and perform an act which may be very repugnant to their patients; and it does seem to forcibly break through that proper reticence which is observed by every careful physician concerning the private affairs of the families under his care. The objections are very forcible—so forcible that we do not think these reports will ever be furnished cheerfully. We doubt still (for we ventured an opinion on the subject some time ago) whether this conviction will have as good an effect as might have been obtained by a strong circular from the chairman to the members of the profession, urging their co-operation in the matter. It is still our opinion that the Board of Health is entitled to have instant reports of every case of smallpox, but we also still consider that this duty should be made to fall upon the citizens and not upon the physicians. We might well copy laws in force elsewhere, by which the householder, head of family, or landlord, &c., is bound to send in the required notification. We hope some day to see a modification of the by-law introduced to that effect.

CANADA MEDICAL ASSOCIATION.

We would again remind our readers that this Association meets in Chatham, Ont., on Wednesday and Thursday, 2nd and 3rd of September. As will be seen, the number and character of the communications are such as to ensure the scientific suc-

cess of this meeting. It is to be hoped that the members of the profession throughout the length and breadth of the land will avail themselves of this opportunity of practically benefiting themselves and at the same time enjoying a short holiday. The proportion of practitioners attending our annual Association should be much larger than it is. No man can attend these gatherings in a proper spirit without coming away greatly benefited by what he has heard and seen.

The following are the papers promised up to August 19th :—

1. Dr. William Osler (Philadelphia). The Clinical and Pathological Relations of the Cæcum and Appendix.
2. Dr. James A. Grant (Ottawa)..... Aortic Aneurism.
3. Dr. W. B. Geikie (Toronto) ..... Retroversion of the Gravid Uterus.
4. Dr. Burt (Paris)..... Internal Urethrotomy.
5. Dr. Holmes (Chatham) ..... Observations on Puerperal Mania
6. Dr. Kerr (Winnipeg) .... Fractures in the Neighborhood of Joints.
7. Dr. Fenwick (Montreal) ..... Amputation of the Breast, with Cases.
8. Dr. Bethune (Wingham) ..... Exhibition of Specimens:
   a. Parasite from an Abscess of the Thigh.
   b. Aneurism of the Pulmonary Artery.
9. Dr. Worthington (Clinton)..... Epidemic Cerebro-Spinal Meningitis
10. Dr. Fulton (Toronto)..... Subperiosteal Amputation.
11. Dr. Campbell (Seaforth)..... An Account of a Case of Trephining the Mastoid Bone.
12. Dr. Rutherford (Chatham)..... Supra-Pubic Urination.
13. Dr. Stephen Lett (Homewood Retreat, Guelph)..... Inebriety, a Disease the result of Physical Causes.
14. Dr. A. H. Wright (Toronto)..... Phlegmasia Dolens.
15. Dr. McKeough (Chatham)..... Observations on the Use of Pilocarpine in Puerperal Eclampsia.
16. Dr. J. E. Graham (Toronto)..... Case of Dissecting Aneurism of the Thoracic and Abdominal Aorta, with specimens.
17. Dr. Shepherd (Montreal)..... Excision of the Tongue, with preliminary Ligature of the Linguals.
18. Dr. Alloway (Montreal)..... Micro-Organisms in Puerperal Septicæmia—Prophylaxis and Treatment.
19. Dr. Ryerson (Toronto)..... 1. Surgical work in the late Rebellion.
    2. Atrophic Nasal Catarrh.
20. Dr. Atherton (Toronto) ..... Notes on two cases of Abdominal Section for Uterine Myomata.

21. Dr. Nattress (Toronto).....Field Hospitals and Climate in the North-West Territory.
22. Dr. Gardner (Montreal).....History of a case of Double Uterus, with exhibition of the specimen.
23. Dr. A. E. Hanna (Lansdowne)...Enlarged Prostate.
24. Dr. Oldright (Toronto).....A few notes on a Case of Pernicious Anæmia.
25. Dr. Ames (Brigden, Ont.).....The Bite of a Rattlesnake.
26. Dr. Wilkins (Montreal).....Exhibitions of specimens (macroscopical and microscopical) illustrating the infective nature of Tuberculosis.
27. Dr. Stewart (Montreal).....The Curability of cases of the chronic form of Infantile Paralysis.
28. Dr. Geo. W. Major (Montreal)....Possible Complications of Naso-Pharyngeal Operations.
29. Dr. Arnott (London).....Sources of Malaria.
30. Dr. Hingston (Montreal).....Nephrotomy, with cases.

—It has been thought advisable to bring this JOURNAL into line with the majority of the monthlies which appear on the 1st of the month. For the future, therefore, we hope to present our JOURNAL on the 1st instead of on the 15th as hitherto.

DR. STEWART.—Our readers will notice that we have secured the co-operation of Prof. James Stewart in the work of editing this JOURNAL. The addition thus made to our staff will no doubt result in improvement in many directions, for the ability, energy and literary tendencies of Dr. Stewart are well known to all.

—Smallpox is rapidly spreading in Montreal. It is stated that already 120 deaths have occurred, which number must, of course, correspond with at least four times as many cases. The Civic Hospital has for days been more than full, patients having even been put in upper rooms, quite unfit for the purpose. The Board of Health, with commendable energy, are engaged in the erection of a second building, which will probably be amply sufficient. The fear is, that the haste with which the construction is being carried on will necessitate very poor work. We never heard any good reason given for the tearing down of the wooden building used in the last epidemic.

The utter failure of our local supply of vaccine just as smallpox took hold upon us was a public calamity. It has de-

layed vaccination throughout the city, and has given ground for those opposed to the principle to urge their fears of the quality of the lymph. Vaccine which is giving good satisfaction is being regularly supplied from Boston and elsewhere, and there is no reason for any being deprived of this invaluable protective.

—It is proposed by a committee of distinguished physicians in Florence to collect subscriptions for a memorial to the late Prof. Pacini, the distinguished Italian anatomist. The following circular has been issued, and is a handsome tribute in itself to the memory of the great scientist :—

"Honor to the memory of a great citizen, destined to remind posterity of his virtues and his labors, is a duty which the nation that gave him birth is bound to discharge. From such men proceeds an example which acts as a noble oration, preaching great deeds to future generations. Italy has such a duty to perform in memory of Phillip Pacini, who discovered the tactile corpuscles, who, since 1854, has devoted himself to profound and original researches on the specific nature of Asiatic cholera, and who has introduced a method of artificial respiration which repeated experiments have proved to be the best for saving life. It is for Italians, then, to perpetuate the fame of this man, who, springing from a humble origin, has succeeded, by force of will, in gaining universal renown in anatomy and biology; who, after a life of exemplary activity, in the course of which he never thought of his own interests, but rather considered the welfare of humanity, died poor, leaving to his successors nought but certain precious documents of high merit, such as the 'Structure of the Retina,' 'The Electrical Organ of the Gymnotus,' and 'The Extra-Vascular Circulation of the Blood.'"

Obituary.

Prof. Milne-Edwards.—The death of this distinguished scientist has just been announced, at the advanced age of 88. He was born at Bruges, in Belgium, and studied medicine in Paris. In 1841 he was elected Professor at the Jardin des Plantes, eventually succeeding Geoffrey St. Hilaire. His services to science are well known. His most important contributions are contained in the twelve volumes of his Leçons sur la Physiologie et l'Anatomie comparée de l'Homme et des Animaux.

Medical Items.

—During the past summer session there were 5,122 students in the University of Vienna. Of this number 2,310 were medicals.

—Drs. Leube, Liebermeister and Lichtheim have each been named as the probable successor of Prof. Gerhardt, who has recently been translated from the Wurzburg to the Berlin Medical Klinik.

—Dr. T. W. Mills, who has been lately engaged in a very important series of original researches at the Marine Zoological Laboratory at Beauport, North Carolina, has returned to continue his investigations at the Johns-Hopkins University, Baltimore.

—A curious fraud is reported to have been perpetrated near Buxton. One William Mellor became ill, and was attended by a medical man. On recovery, he shaved his beard and otherwise altered his appearance, presented himself to the doctor as the brother of the sick man, and announced the death of the patient. Acting on this information, the doctor gave a certificate, which enabled Mr. Mellor to register his own death, and draw his burial money from a benefit society. He then made off, and has perhaps gone to die in some other part of the country in a manner equally advantageous to himself.

Belladonna in the Treatment of Intestinal Obstruction.—Dr. T. J. Hudson (*Med. Times and Gazette*) thinks that in these cases the best way to use belladonna is to apply the extract to the abdomen with very hot poultices, and to give one or two grains of the extract as a suppository every hour, or inject 1-120 of a grain of atropine every two hours until slight dilatation of the pupil is maintained. If the pain continues, and is serious, an injection of 1-80 of a grain of atropine, with $\frac{1}{5}$ of a grain of morphium, is the best, as it combats depression and nausea. Morphine alone often increases the obstruction by causing or increasing nausea and, in the early stage of intussus-

ception, preventing the bowel from righting itself by its own muscular power. He adds the caution that lime-water should not be given, as it decomposes atropine.

Deaths from Poisoning by Wild Honey.—At Branchville, S.C., on June 5, a large number of persons, three of whom died, were poisoned by eating wild honey. Shortly after taking it they all complained of blindness and dizziness, and the honey was found on examination to be strongly impregnated with gelsemium. But for prompt and energetic medical assistance, it is said there would have been twenty deaths instead of three. A few days before, there occurred two deaths in the neighborhood which could not be satisfactory accounted for, but which are now believed to have been undoubtedly due to the same cause.—*Gaillard's Med. Journal.*

How to Avoid Night Calls.—A story is going the rounds (who started it we do not know) at the expense of the young physician who is always so busy that he does'nt know what to do. "Ive got more business than I can attend to," boasted he to an old practitioner who knew he lied. "I had to get out of bed five times last night." "Why don't you buy some insect powder?" quietly asked the old doctor.—*Medical Age.*

A Fashionable Amusement.—An English medical paper says that "the care of babies has become quite a fashionable amusement among mothers," and attributes this growth of maternal solicitude to the innumerable "guides to nursing" published in England of late. In connection with this statement, the following item from the *Providence Journal* may be of interest: Among the returns of death last month in this city was one of a young child, the cause of which was given by the physician thus: Cause of death—"'How to Feed the Baby' and its Boston author."—*Ex.*

Glycerole of Celery Compound.—This safe mixture (containing no opium) for the relief of infants teething and for adults suffering from nervousness, headache, etc., supplies a want long felt by the profession, and should meet with their hearty support, as its advantages over the strong narcotics will be at once apparent to every physician. *Celery Compound* has been thoroughly tested and approved by the head nurse at the Toronto Infants' Home and Infirmary, and strongly recommended by her.

CANADA

MEDICAL & SURGICAL JOURNAL

OCTOBER, 1885.

Original Communications.

THE GROWTH OF A PROFESSION.

AN ADDRESS DELIVERED AT THE EIGHTEENTH ANNUAL MEETING OF THE CANADIAN MEDICAL ASSOCIATION, HELD AT CHATHAM, ONT., SEPT. 2 AND 3, 1885.

BY WILLIAM OSLER, M.D.,
President of the Association; Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia.

GENTLEMEN:—When I removed last year to another part of the great field in which, without distinction of race or country, we are all laborers, it seemed good to you, fellow-workers, in the kindness of your hearts, to nominate me President of the Association. If in the tumult of thoughts which come tumbling unbidden into a man's mind, the idea of such an honor ever came, truly it was as a speck in the horizon of my ambition towards which, as years rolled on, I might travel; but it has been ordered otherwise, and as exceptional circumstances have placed me in an exceptional position, I can but crave your indulgence in the exercise of an office for which I feel that I lack certain important qualifications.

Let me, in the first place, give expression to the general regret that the Association has not been able to carry out its programme and meet in Winnipeg as had been arranged, but with Mars in the ascendant, and Big Bear and Poundmaker on the warpath, our brethren of the prairie city thought it would be better—perhaps safer—to postpone the meeting in the North-West unto a more convenient season, when grim-visaged war shall have

smoothed his wrinkled front. But, again, let me express the satisfaction we feel at being able to meet here in Chatham among men we know so well, who have been so faithful to the Association, and in a section of the country in which the profession possesses so many able and industrious members.

In seeking for a theme upon which to address you, I felt that if we met in Winnipeg, some subject connected with growth and development would alone be in keeping with the remarkable progress which the North-West and its capital have made during the past decade. I thought that by tracing the lines along which the profession in a new country should advance, the meeting might perhaps help the movement and give a stimulus to thought and action, which is often one of the best effects of gatherings of this kind. When circumstances necessitated a change in the place of meeting, it seemed as if my subject, upon which I had spent some thought, should also be changed ; but, on reflection, it was evident that the conditions in the older provinces were only an advanced stage of those existing in Winnipeg and Manitoba—progress should be our watchword here as there, growth and development the essential features of our professional life, and upon these topics I could as well address you in Ontario as in the North-West. I want, then, to tell you, in as few words as possible, just how far on we have got and what have been the methods of our progress. In some parts of the Dominion we may study the profession in its simplest form ; in the North-West Territories, for example, it has not advanced beyond the amœba stage. The doctors there are so many unicellular creatures—masses of undifferentiated professional protoplasm, without organization or special functional activities. They cannot even exercise the rhizopodal mode of multiplication, but increase by the low inorganic method of accretion. In the older provinces, on the other hand, the professional units have combined for the general good into a sort of polypidom—the organized profession—a great advance on the amœba stage ; there are also special organs of reproduction known as the medical schools, and there are signs of a nervous system—medical societies.

The three aspects, then, in the growth and development of

the profession to which I wish to direct your attention are (1) the organized profession ; (2) the medical school ; and (3) the medical society.

1. *The organized profession.*—In a well-arranged community a citizen should feel that he can at any time command the services of a man who has received a fair training in the science and art of medicine, into whose hands he may commit with safety the lives of those near and dear to him. For the State to regulate and determine the individuals to whom the citizen may apply, is not by most persons thought unreasonable. There are those, however, who would have no restrictions, but allow the utmost freedom and permit assumption and assurance to have full sway, and give to any man without education the right to practice medicine. This has never been the case in Canada. The men who came here in the early days to practise medicine were chiefly English and Scotch licentiates, who brought with them the traditions and customs of the profession in Great Britain. Very many of them were army surgeons, accustomed by long training to system and discipline. Without medical schools, the only recourse for a young man wishing to enter the profession was either to cross the ocean or to serve an apprenticeship with and receive instruction from a practitioner. Boards for the inspection of diplomas of men coming from outside the country and for the examination of the young men who had passed the necessary time with local preceptors were organized in the old Province of Quebec in 1788, and in Upper Canada in 1815—dates ever to be memorable in the history of medicine in this country.

It is a common experience that men do not always appreciate their blessings and advantages. Those who are the best off are the least sensible of it. I have often thought this of the profession in Canada in relation to the Medical Boards, when I have heard murmurs of discontent. As they constitute a special feature in the Canadian medical system, you will allow me to refer to their origin and functions at some length. Primarily, the Medical Board is simply a Bureau of Registration appointed by the State, as, in fact, the British Medical Council is to-day ; but here, at an early period, before the establishment of schools

and universities, it was an examining body as well, and granted permits to practise. As universities sprang up, the latter part of the duties of the Medical Board was in part abrogated, and the functions more or less limited to the registration of degrees. An exceedingly important change was effected when the Boards became elective bodies, truly representative of the profession. In Ontario, this was brought about by the Act of 1866, and in Quebec by the Act of 1847. In this province, the mode of selection of members is truly democratic, the profession in each electoral district selecting their candidate. In the Province of Quebec a more cumbrous and less distinctly popular mode is followed, whereby each constituent of a district votes not only for his own, but for the candidates in all other districts. As proxies are allowed, the entire election may be in the hands of any clique collecting the largest number; but this method is doomed, and the more popular one will shortly be introduced.

The struggle has all along been between the universities and the profession, as represented by the Medical Boards. The former have always maintained the right of their alumni to license without further examination—a privilege still granted in the Province of Quebec. But the universities chartered by the crown in past days did more: they opposed bitterly the incorporation of independent medical schools, as witness the hostility to the Montreal School of Medicine by the McGill University, and to the Toronto School of Medicine by the University of Toronto. Much of this opposition was based on the highest motives. The opponents were afraid that if numerous independent schools arose, each with licensing power, and the license recognized by the Provincial Boards, free trade in diplomas would result, the standard be lowered, and the profession, as a profession, ruined.

As at present constituted, the Medical Boards are entrusted by law with full power to regulate medical education in the provinces, to say what preliminary branches shall be required, of what the curriculum shall consist, and to make such changes as from time to time may seem advisable. When we consider the conditions under which we live, these enactments are in the

highest degree advantageous. There are in the Dominion eleven medical schools, many of which are corporations without any control, with faculties irresponsible as regards supervision by trustees, censors, or governors. Even of those which form actual parts of universities, the faculties are partly, or altogether, independent, and there have been instances in which, for greater freedom, the benefits of university connections have been sacrificed. The inevitable result of such a state of affairs is keen competition. The students are few, the schools are many; expenses are heavy, receipts are light; human nature is frail—what will follow you know—restrictions are relaxed, special inducements are offered, gradually the standard is lowered, the meshes are widened, examinations become a farce, and the schools degenerate into diploma mills, in which the highest interests of the profession and the safety of the public are prostituted to the cupidity of the owners. The depths to which unlicensed competition will sink the proprietors of some institutions pass the comprehension of a right-minded person. They will compass heaven and earth to gain students, resorting to measures of solicitation and inducement, various tricks and artifices, which would be deemed doubtful in a grave-yard insurance company. Finally, upon the proprietors of such schools comes a sort of moral paralysis, such a condition as divines call the hardened heart, when, incapable of seeing, much less doing, the right, they believe the system in which they work is a true and good one, and attempts at reformation become well nigh hopeless. The picture is not overdrawn. Unrestricted competition between numerous schools means free trade in diplomas, and free trade in this sense is synonymous with manslaughter.

From this disastrous condition the medical boards have saved Canadian schools. Bitterly did the colleges fight against increasing the powers of the boards, jealous in the extreme of their chartered rights, and too often eager in obstructing, intead of furthering, useful legislation, they have found, though they did not know it, victory in defeat. The principle is sound and well founded; the united profession of a country or a province should be the guardian of its own honor; greater than

the schools, which are but a part of it. The control of all matters relating to medical education and practice may safely be entrusted to its care.

The incorporated body of the profession in each of the provinces of Canada is variously known as the "College of Physicians and Surgeons," the "Medical Council," or the "Medical Board," and, as you are all well aware, by the Act of Confederation, each province is left to regulate its own educational affairs. Within the past ten or twelve years, so many important changes have been affected, particularly in the older provinces of Ontario and Quebec, that the boards are gradually approaching a state of efficiency.

As regards education, the ideal board should perform the following duties: 1st. Test the fitness of young men to enter upon the study of medicine; 2nd. Order the curriculum in a manner best suited to the country and the requirements of modern medicine; and 3rd. Control absolutely the examinations for the license to practice. Upon each of these points I propose to make a few remarks, referring particularly to existing conditions:

1. *Preliminary Education and Matriculation.*—In most of the provinces a thoroughly satisfactory system prevails, and a young man, before entering upon the study of medicine, must give evidence that his general education is of such a nature as will enable him to prosecute intelligently the study of a learned profession. If the examination is satisfactory, he is permitted to register, and his studies date from this period. A Board should control its own matriculation examination, and should accept no other. It is directly responsible to the profession that no incompetent person shall be admitted to study. The check comes lighter to a young man, and is more easily borne at this time than later in his career. The examiners should be independent persons, engaged in general teaching, and there should be at least three or four. No one man can conduct a preliminary examination with entire satisfaction. The organization of the board of the matriculation examiners in Quebec should serve as a model for all the other provinces. It was a

decidedly retrograde step when the medical council of this province relegated the entrance examination to other hands, and the acceptance of the intermediate High School certificate is not without disadvantages. We want increasing watchfulness in this matter, and in the interests of higher education the boards should receive the cordial support of the medical schools in their endeavors to arrive at an honest and satisfactory standard. That there has been laxity in the past, every one knows only too well who has had to read many examination papers. Throughout Canada the subjects for matriculation have closely followed those recommended by the British Medical Council, and embrace the elements of a good general education, with a fair amount of Latin. To these special subjects have lately been added Natural Philosophy, Chemistry, and Botany (optional). The student has had in the past to contend with several difficulties which should be removed. He has had to pass in some cases two examinations: one before the Board of his province, and the other before the university at which he wishes to take his degree. Now the matriculation examination of the Boards should be placed on such a level, and conducted in such a way, that any university could consistently accept it in lieu of its own; and if it was universally recognized by the profession, by teachers of high schools, and by the candidates, that there was but one portal of admission to the study of medicine, and that through the medical board by means of its authorized examiners, a great deal of trouble and annoyance would be prevented. Again, in the interests of the student, the greatest care should be exercised in the selection by the examiners of subjects which the candidates will find taught in the advanced classes of the high schools. Similar books to those read for the other matriculations should as far as possible be chosen. Lack of attention to these apparently petty details has caused no little irritation on the part of students and teachers.

Let me, then, urge upon you the importance of doing all in your power to put the preliminary education of the students on a good basis; it is in your own hands—insist on competent, independent boards, responsible to your chosen representatives;

and, what is equally important, impress upon your students and the young men who seek your advice, the need of careful preparation. As a result of some years of observation, I should say that the general practitioners throughout the country are not quite alive to their duty in this matter. Too often young men go up for examination imperfectly prepared, and just slip through, to flounder on, hampered at every turn by defective preliminary training.

2. *The Regulation of the Curriculum.*—The general profession, through its delegates, has an incontrovertible right to regulate and frame the curriculum of study which men shall follow who aspire to join its ranks. The governments allow this right, and have empowered the Boards to frame such measures as they see fit. In the exercise of this function there has been a little friction in the past, and in no one of their duties will the boards of the various provinces require to proceed with greater circumspection in the future. That there has been a good deal of tinkering, and not always of a satisfactory kind, is a complaint frequently made by schoolmen. That there has been very little, and that the results, on the whole, have not been bad, would, I think, be the verdict of any one who looked into the matter fully. The curriculum is at present in a transition stage, and we must expect in the next few years to see important changes, but into these I do not propose to go in detail. One thing is clear, the Boards and the teaching bodies must act in concert—in the interest of the student and of the profession harmonious action must be arranged. In this country the students of all classes seek the degree as well as the license and are not, as the majority are in Great Britain, satisfied with the latter. Hence the imperative needs of a certain uniformity in the requirements of the boards and of the universities. The teachers cannot possibly arrange the instruction on diverse plans. The duty of the Board is to lay down a minimum curriculum to which every student shall conform, and which the schools can easily carry out. The university requirements, while as much higher as the authorities chose to exact, should be laid down in the same lines, so that a student could easily

proceed in his studies for the one or the other without inconvenience, and the teachers prepare a man for either examination without needless repetitions.

Fortunately the universities and teaching bodies are well represented—too well in Ontario in proportion to the territorial representatives—on the boards, and the introduction and regulation of the necessary changes in the curriculum will fall chiefly into the hands of their delegates, but there are many details which require careful attention on the part of all. The members of the educational committees have their work laid out for the next few years. Among important questions which await settlement in some of the provinces are the strict enforcement of the four years of study and the advisability of prolonging the session to nine months, or, what amounts to the same thing, making the summer session compulsory. The plan of allowing a student to pass one of his four years of study with a physician should be done away with at as early a date as possible. For two reasons: in the first place it is, in a majority of instances, a farce, and we find on inquiry that the student has been pursuing his usual avocation, and perhaps going to a doctor's office in the evening; it is certainly not the equivalent of a session at college. If allowed at all, it should not be the first year, but the third, as permitted in the Province of Quebec, for then a student is in a position to obtain really valuable instruction in practical medicine and surgery from his preceptor. I was surprised a few years ago, on obtaining the statistics from the registrar of one of the boards, to find how many men there were who passed on the three sessions. In this matter, the boards should not be behind the leading universities, which no longer recognize the year with a physician as the equivalent of a session. And, in the second place, the change should be made in the interests of the schools themselves. On no possible scheme can a three-sessions course be satisfactorily arranged. Either a man pays too much attention to his primary subjects in the first two sessions and leaves the important final branches for one short session, or he tries in his second session to work hard at both and ends in a muddle-pated condition

which unfits him for either. The prolongation of the session to nine months, as now exists in some of the schools of the Province of Quebec, must ultimately come in all the colleges. How the foolish habit arose of giving six months vacation we need not stop to inquire—the folly of it is too evident to need remark; and we can safely predict that within ten years the mine months course will be universal; either as a continuous session, as at Laval University, or by making the now optional summer session compulsory.

3. *The control of the licensing power.*—This is the most important function of the medical boards. Acting on behalf of the State, it is their duty to see that all candidates for the license are properly qualified. They stand as the guardians of the public and of the profession, and here their responsibilities are indeed great. In the ideal condition, there should be but one portal in each country through which a man can enter the profession and legally exercise its rights—a uniform standard of qualification to which each one must conform. This is secured in some countries by the direct action of the State, which appoints examiners for the purpose. But a better syster system is that which we have here reached, in which the State entrusts the incorporated profession with the duty. On this question the hottest battles of the profession have been and are being fought. The universities and chartered colleges have contested, inch by inch, the rights of the profession in this matter, and the struggle has not everywhere concluded. The possession of a degree in medicine from a university, no matter how reputable, cannot on any reasonable ground carry with it the right to registration and practice. The schools are independent bodies, outside, in a large measure, of State, and altogether of professional, control; they are numerous, and the competition between them is close; the requirements for graduation are variable, and the standard of examination unequal. They are close corporations, and neither the public nor the profession ever know what transpires in their councils. In the majority the teachers are also the examiners. Such a state of things can only lead to relaxation, and is fraught with danger to the best interests of all concerned.

A uniform system has not yet been adopted in all the provinces. In too many the possession of a degree, obtained after a proper course of study, still entitles the holder to the license, all others having to submit to examination. In the Province of Ontario the most advanced position has been reached, and the one road to registration is through the examination conducted by a board appointed by the medical council. To this the other provinces must ultimately come. It is what the profession in Great Britain has been striving after for years, and so far striving in vain against the power of corporations and vested interests. In the Province of Quebec the medical board accepts degrees from the local universities to which it sends assessors—after the manner of the British Medical Council—who report on the nature of the examinations. Others than the holders of such degrees must submit to examination. Although this method has not worked badly, it is but a make-shift, and must finally be replaced by a central board of examiners, who shall test the qualifications of all candidates. Unfortunately the prevalent conditions of that province are such that a dual board will be needed, one for the French and one for the English.

In carrying out the details of a central examining board, there are inevitable difficulties which at first cause worry and discontent, but, with patience and mutual forbearance, gradually vanish. The choice of suitable examiners is a delicate matter, and one on which the schoolmen are apt to air grievances more or less just. They certainly should not be selected at random from the members of the council. A few years ago a friend of mine was nominated examiner in chemistry at the Quebec Board. He was a remarkably able practitioner, with a very indistinct and hazy knowledge of chemistry, and it was hard to say who was most uneasy at the examination, Dr. —— or the students. Teachers in the schools have good grounds for complaint when the Boards select as examiners on special subjects—such as anatomy, chemistry, physiology and pathology —men who have been for years in active practice without any possibility of keeping their own knowledge on these subjects fresh and practical, and who to "brush up" require to work as hard, may be, as the poor candidates. With the more practical

branches these difficulties do not exist, and the Councils have a wide field for selection. Where special technical knowledge is needed, it would be preferable even to override the law which forbids the selection by the Boards of any teacher as an examiner on his own subject. For the "Staats-Examen" in Germany, the professors in different departments are usually chosen by the government to conduct the examination in their special branches. The point is one to which the Boards should attend carefully in the future. They lose the respect of the profession and of the students in nominating as examiners men without special qualifications in certain fields.

The examinations for the license should be made in all respects as practical as possible, but to do this a Provincial Board must possess its own building and appliances, and make arrangements with hospital authorities to have free access to a sufficient number of patients. As the work is done primarily in the interests of the public, it is clearly the duty of the legislatures to assist in making suitable provision, and it seems probable that Ontario, the first to set the example of a one-portal licensing system, will also be the first to have a local habitation worthy of her incorporated profession. Such a building should contain the paraphernalia necessary for examination purposes. The division into a primary and final examination, as at present made in most of our universities, and at the Ontario Medical Council, seems the best arrangement. The former embracing anatomy, physiology, general and medical chemistry, and materia medica; the latter, the practical branches of medicine, surgery and midwifery. In practical details, the "Staats-Examen" of Germany might in many particulars be followed.

A serious difficulty has been felt in conducting the examinations satisfactorily as regards time, place and rapidity. They should come off after the university examinations have been completed, and not, as now, immediately at the close of the session. More time could then be given, which will be necessary if the tests are to be made more practical. As the number of candidates increases, the examiners on each branch should be doubled. One centre in each province should be chosen for the sittings of

the Board, and in almost each instance this will be the chief town. To go to Quebec for one meeting and Montreal the next, as is the practice in the Province of Quebec, and to hold an examination in Kingston as well as in Toronto, are touching and tender tributes to age with which a harder generation must soon dispense.

Very much more time must be hereafter given to those practical portions of the examinations which afford the only true test of a man's fitness to enter the profession. The day of theoretical examinations is over.

Permit me to refer to one or two other questions in connection with the Medical Boards. An anomaly which has been the source of no little irritation results from our close connection with the mother country. Any registered practitioner of Great Britain, under the present British Act, can claim registration in the colonies without further examination. For some years Ontario contested the right, but it was finally settled by the registration of Dr. E. St. G. Baldwin in 1879 and Dr. A. E. Mallory in 1880, since which time many have been entered on the register without examination. The Medical Bill, which was shelved last year in the House of Commons, contained a clause permitting the colonies to make any regulations they pleased concerning registration, and doubtless a similar proviso will appear in a future bill. The objections to receiving British registration are precisely those made against the reception of Canadian registration in Great Britain. The examinations are conducted by corporations with varied standards, of whose proceedings nothing is known, and over which no control can be exercised. But in Ontario the shoe pinches badly in another way. After graduating, students are enabled to give the Board the slip by taking an English or Scotch qualification and registering in Great Britain, when they return and are entered upon the register without further examination. The objection to this lies in the fact that many men have evaded the just regulations of their province and returned with British enregistration, when even they could not have qualified for examination at the Ontario Medical Board. With few exceptions, Canadians seek in Great

Britain the easier qualifications, particularly the license of Edinburgh colleges. At some of these the custom has been, with Canadian graduates, to examine the parchment, accept the University degree, and admit the candidate to examination without any further inquiry. To avoid an injustice, the British licensing bodies must examine the matriculation certificate, and have satisfactory proof by class tickets that a student has spent four years in the study of medicine. Under these conditions registration in Ontario on a British certificate would be no hardship, though there would still be the unfair discrimination against local institutions.

Through the kindness of Dr. Pyne, the Registrar, I am able to give you some figures bearing on this question. In the past five years 378 men have registered in the Province of Ontario, and of these there were 93 Canadians who did so on their British registration—that is to say, about one-fourth of the number have avoided the enactments of the Board by proceeding to Great Britain and passing at one of the colleges. No one can doubt that these 93 men were greatly benefited by the period of additional study and by contact with men of other schools and countries, but they would have been still more benefited if they had first conformed to the requirements of their own province, and aided the profession in maintaining regulations the benefits of which are universally recognized.

The fees demanded by the Boards excite a good deal of grumbling on the part of students and practitioners. A sum of $70 is charged by the Ontario Board for the three examinations, matriculation, primary and final; and in Quebec the registration fee is $20 and the matriculation $10. It is the old story, those who are best treated often complain the most. In the matter of fees, the medical students of Canada are in too easy a position, and they must expect changes in the near future. While the expenses of conducting a medical school have quadrupled in the past twenty-five years, the fees have not increased 10 per cent. The charges of the Boards are just and reasonable, as well as necessary to meet expenses. The annual tax on physicians of $1 in Ontario and $2 in Quebec is often spoken of as irksome, but surely it is but a trifling contribution to the general welfare of the profession.

It seems extraordinary to outsiders that in a country like Canada, with scarcely five millions of inhabitants, there should be so many licensing boards; and a still greater anomaly, that a licentiate in one province cannot practice in another—that there should be no reciprocity. So it seemed also to many earnest minds a decade or so ago, when in this Association a strong attempt was made at several meetings to frame a Dominion Medical Bill. It failed, as will, I think, subsequent ones, should they be made. Only one remedy remains—the Boards of the various provinces may in time so assimilate the curriculum and examinations that reciprocity may become possible; but this we cannot expect for some years. For certain purposes a Dominion Registration Bureau at Ottawa seems specially indicated; thus the surgeon of a Quebec regiment doing duty in Ontario would be practising illegally, and in the marine, the surgeons sailing in the passenger steamers must be registered in the province of the port from which the vessel hails. There would be great if not insuperable objections raised to any such Bureau, though it might be feasible to devise a plan for the military surgeons and those belonging to the mercantile marine.

I have dealt thus fully with the constitution and functions of the medical boards of the provinces, because I feel convinced that the safety of the profession rests with them. Of inestimable service in the past, their work in the future will be even more beneficent. Do arouse to a sense of your professional advantages. Where else do the medical men of a country enjoy the rights of conducting their own affairs in their own parliament? Look at Great Britain, where our mighty sister Association, with all her influence, and backed by eleven thousand members, could not force the principle of professional representation into the last medical bill, and at the best was only able to secure three or four members from the profession at large. Rest content, when in each province of this Dominion you have (1) an elective representative assembly (medical board, council or college), with members from each teaching body; (2) absolute control of preliminary qualifications, curriculum, and examinations for the license to practice; (3) appropriate accommodation for the

meetings of the boards, for the conducting of examinations, and for preservation of the local and general archives of the profession. The full development of the Acts of 1788 and 1815 will not be reached until these things are accomplished. The first two you have already won in a majority of the provinces, the last will perhaps be the most difficult of accomplishment; but I feel confident that the day is not distant when, in the capital of each province, the incorporated profession will have a stately Æsculapian temple worthy the traditions and aspirations of our high calling.

And here I may reasonably conclude this portion of my theme, which is concerned particularly with the relations of the profession and the community, but I will dwell upon one point. I began by saying that in a well ordered State every citizen should feel that he has near at hand well-trained men, to whom in the hour of need he may turn with confidence, and ask aid for himself, his wife, or his little ones. That throughout Canada this condition exists, that the community is to-day served by capable and well-trained men, that within reach of the poorest within our smallest villages there is an honest, capable physician, that impostors and charlatans are few; these, gentlemen, are some of the blessings for which we may, lifting both hands to heaven, thank our medical boards.

To another important relation of the medical profession to the community I can but briefly refer. One of the most remarkable developments of modern medicine has been the direction of the study of the causes and mode of prevention of epidemic diseases. The principles of preventive medicine have been gradually receiving due recognition on the part of the public, and the necessity for organized effort is generally acknowledged. In this province these efforts have resulted in the establishment of the Provincial Board of Health, which is doing a great work, and should receive the active support of the public and the profession. The successful course which it has pursued during the past four years affords a stimulus which the other provinces must sooner or later feel, and sets an example which for very shame they must follow.

2. *The Medical School.*—In the progress and development of a profession, the medical school plays an important and essential part. The primary object is the training of young men in the science and art of medicine, to supply the community with fit and proper persons to take charge of the sick and injured, and it is with this aspect of a medical school that the public is naturally concerned. In most European countries the State, as guardian of the public weal, undertakes the control of medical education and subsidizes largely the medical faculties of the universities. In Great Britain this is also done to a slight extent, but everywhere on this continent the schools have arisen as a result of private enterprise. The origin and evolution of the medical school in this country are quite easy to trace. For many years private tuition was the sole means of obtaining a medical education, and the system of apprenticeship prevailed to a large extent. In a series of "grinds" or "quizzes" the preceptor would take his pupils over the whole range of medicine and surgery, and a knowledge of anatomy was obtained by private dissection, which was carried on extensively. The office practice and the daily round furnished clinical material. The student was much with his preceptor, became his friend and companion, and in the course of four or five years, sometimes less, grew really very proficient in the practical working of his profession, and felt prepared to present himself before the Provincial Board. Some of the very best practitioners we have had in Canada received their medical education in this way. Take the Medical Register of Ontario or Quebec and seek out the names of the men who have simply Lic. of the Med. Bd. of Upper Canada or of Lower Canada after them, and we find among them many of the men we know best and respect the most highly. Without doubt, in good hands, the old system had great advantages; the essential, useful, and practical details of professional life were well taught: for the refinements and superfluities, the busy physician found no time. Among the private teachers, before medical schools became generally accessible, were some notable men, whose names deserve to be mentioned in grateful remembrance. Dr. James Douglass, of Quebec, was a remarkably successful as

well as popular teacher, and his pupils had the great advantage of the Marine Hospital. He still lives in peaceful retirement, one of the few links uniting the profession of Quebec to a generation long past. The late Dr. Rolph, from the date of his removal to Toronto in 1831 until the foundation of the Toronto School of Medicine in 1843, was one of the most energetic and successful private teachers, and many of his pupils of that date now occupy prominent positions among us. Even after the troublous times of 1837, when he had to cross the border, the students followed him to Rochester.

The organization of the first medical school arose from the association of two or three men engaged in private teaching, who thought that it would be more advantageous, and save time, if each one taught one or two branches. In 1824, at Montreal, Drs. Stephenson, Holmes, Caldwell and Robertson gave the first definite course of lectures in medicine delivered in this country. This "Medical Institution," as they called it, became, in 1829, the medical faculty of McGill College, and remained for many years the only medical school in the country. The next attempt was a much more ambitious one. As early as 1835-6 efforts were made to induce the government of Sir John Colborne to establish a faculty of medicine in King's College, Toronto, and elaborate plans were prepared, but nothing came of it until 1843, when a faculty was organized with a full and able staff. A more favorable inauguration of a medical school could not have been devised; with State aid, well-trained and efficient professors, who were in the receipt of salaries ranging from £225 to £350—fine emoluments for those days. From all I can gather, the school was a thoroughly efficient one, and did good work in medical education, but the professors made certain mistakes for which they paid heavily. In opposing the incorporation of the Toronto School of Medicine, which had been organized by Dr. Rolph in 1843, they acted most injudiciously, laid the foundation of future trouble, and too many of them were hostile to the profession in their desire for a better medical act. After an existence of ten years, an act of the Legislature left the University of Toronto with only the academical depart-

ment, and swept away a medical school which, whatever its faults, had in it the elements of ultimate success, and left the profession and the public at the mercy of irresponsible schools without foundations and dependent on private enterprise. There can be no doubt that the abolition of the faculty of medicine of the University of Toronto retarded seriously the growth of the profession in this country. The establishment of a well-equipped institution would have been an example and a stimulus to others, and as years passed, the difficulties inevitably associated with the first few years of existence would have vanished.

In 1843 the Montreal School of Medicine and Surgery was founded, and continues as the largest French school in the Dominion. About the same time the St. Lawrence School was started in Montreal in opposition to McGill College, but it had a short life and soon expired. The Quebec School of Medicine next started, and became, and continues as the medical faculty of Laval University. In Toronto a third school was added to the existing ones in 1850 by the establishment of the Upper Canada School of Medicine, which, in its first session, became the medical faculty of Trinity College, and after an existence of three or four sessions, ended by the resignation of the professors, who refused to submit to certain vexatious test enactments of a religious nature demanded by the corporation. The faculty of medicine of Victoria College was next established in Toronto, for years known as Rolph's School; it terminated its existence in 1869. The Kingston School, organized as a faculty of Queen's University, is now known as the Royal College of Physicians and Surgeons. The faculty of medicine of Bishop's College, Lennoxville, P.Q., was organized in Montreal in 1870. In the same year the faculty of medicine of Trinity College was re-organized, and exists now as a separate corporation known as Trinity Medical School. The Medical School at Halifax is the only one which has been started in the Lower Provinces.

The most recent additions to our list have been the Branch of Laval Medical Faculty at Montreal, 1877; the faculty of medicine of Western University, London, Ont., and the faculty of the University of Manitoba, both organized within the past

few years; and in 1883, as the outcome of an unfortunate *contretemps* at Kingston, a School of Medicine for women was started in that city, and followed by the establishment of another for the same purpose in Toronto.

Of this latest development, there cannot but be a feeling of regret that our friends in these cities should have entered upon undertakings so needless in this country. It is useless manufacturing articles for which there is no market, and in Canada the people have not yet reached the condition in which the lady doctor finds a suitable environment. Look at the facts as they are; even the larger cities can only support one or two; in fact, Quebec and Montreal have none, and in the smaller towns and villages of this country she would starve. For the sake of educating six or eight women annually, of whom at least three or four will go abroad, two more medical schools have been established, with full staffs of professors and teachers. We can but hope that at the expiration of the five years for which kind friends have guaranteed the expenses, the promoters of these institutions will be in a position to place their energies and funds at the disposal of the schools devoted to the sterner sex. Do not understand from these remarks that I am in any way hostile to the admission of women to our ranks; on the contrary, my sympathies are entirely with them in the attempt to work out the problem as to how far they can succeed in such an arduous profession as that of medicine.

Exclusive, then, of the schools for women, there are existing eleven teaching bodies throughout the country, three French and eight English, a goodly number to supply the wants of about five millions of people. In Great Britain, with a population of 36 millions, there are about 30 medical schools; and in the United States, with a population of fifty millions, there are 139 schools conducted in the interests of the regular profession, so that in comparison with these countries we are very abundantly supplied.

The youngest among us may have watched the incubation and birth, and many of us the gradual growth and development, of a medical school. With scarcely an exception, every one which

has started owes its origin to the individual exertions of members of the profession. There are men present who could tell us that the task is not a light one to-day, but what must it have been to those who began the work fifty or sixty years ago? It was an unending struggle against serious obstacles and difficulties. Money had to be raised for buildings and apparatus, and with but few students and small returns, the marvel is not that only four have succumbed in the struggle, but that so many have survived. The internal difficulties are often the most serious; the brunt of the work in such enterprises always falls on one or two zealous men who have to carry the chief part of the load, and the dead weight of lethargic colleagues has been the heaviest burden to many an ardent spirit.

Debt is the millstone which keeps the young schools under for many years; borrowed money furnishes the appliances, etc., and even in the older schools each addition to the buildings means so much more interest to pay. In only one or two of the faculties connected with universities have the governors even furnished suitable accommodations. The financial condition is for years oppressing, and from session to session the school drags on, living from hand to mouth, barely able to meet liabilities and pay the teachers—at this stage most probably not at all. As the number of students increases, so do the finances improve, and, if a school proves popular, the debts may be paid off and the professors receive fair remuneration; but so long as the attendance is limited, the receipts are only such as will barely meet the expenditures. A difficulty which under the present circumstances seems insuperable, is the fact of absolute dependence for success upon the number of students; small classes mean restricted capabilities for teaching, spiritless instruction, low-spirited professors, and general discontent, particularly on the part of the faculty. Large classes mean, perhaps, the opposite of all this, but not always; still there is a cheeriness about a professor the benches of whose class-room are well filled. I have known a small entry depress for the session the spirits of a man whose estimation of everything was numerical.

Let us glance at the facts as they stand. I estimate that last

season there were in the eleven Canadian schools about 900 students, from whom, with trifling exception, the entire support of the institutions was derived. Four of the eleven institutions are greedy enough to attract at least 700 students, leaving about 200 to be divided among the seven other schools. With the low scale of fees at present in vogue, I doubt if each student paid more than an average of $80 per annum for instruction, so that the total receipts at the number of students above mentioned would be about $70,000, of which at least $55,000 goes to four of the schools, leaving a balance of not more than $15,000 to be divided among the remaining seven. Now, a modern school of medicine is a serious affair to undertake and equip; there are branches to be taught which require, even in the smallest schools, plenty of room and good apparatus. Laboratories for the practical teaching of chemistry, histology, anatomy, pathology and physiology must be provided, and arrangements made for library and museum purposes. Personal expenditure on the part of members of the faculty can alone supply these in some of the schools, and in almost all, the rule has been that each lecturer from his fees shall provide his own teaching outfit. Where the teacher has enthusiasm and a purse this may work well, and, indeed, does so sometimes, for I know of an instance of an outlay of over two thousand dollars in apparatus, and of another in which the personal laboratory expenses were always between five hundred and one thousand dollars annually. As matters have been in our schools heretofore, without personal expenditure laboratory equipment has been defective. The remarkable impetus which has been given of late to practical teaching has increased very much the expense of conducting a school, for not only have the laboratories to be provided, but special men must be forthcoming with special training. The general practitioner who has for eight or ten years been busy at practical medicine and surgery may step into the professor's chair and give a good, sensible course of lectures; but to conduct laboratory work demands careful and prolonged training, which costs much money, and when obtained has a market value.

One great evil which results from this condition is the com-

petition for patronage among the schools, which I have already alluded to as a danger to be carefully watched by the profession. Too many of the students enter upon the study before they have means sufficient to carry them through the entire course, and they seek special inducements, reduction in fees, exemption from attendance until Christmas, and will often in letters set off one school against another in a most amusing way. Think, gentlemen, to what the unrestricted competition among eleven schools for 900 students might bring the profession! It would be a struggle for existence, in which the public and the profession would certainly be the losers, but with the wise regulations already referred to, existing in each province, the competition is reduced to reasonable limits, as all students, irrespective of their schools, must virtually pursue the same plan of study and for the same length of time.

What is the remedy? The small schools have rights equally with the large; they cannot be asked to immolate themselves in the interests of more favored institutions. It is plainly within the duty of the provincial boards to inquire into the equipment of the teaching bodies, and they should refuse recognition to those which have not appliances fit to conduct a modern medical course; or, what would be better still, the medical boards should have the power of prohibiting the establishment of a new school until satisfied that its promoters had money sufficient to begin such an enterprise, and had suitable buildings and hospital accommodation. In the future one of two things will take place: either a considerable number of the small schools will die of starvation—for it is quite evident, on the above financial statement, which is approximately correct, that there are seven existing on class fees which could only support one, and that in a not very flourishing manner—or means must be devised to secure funds from other sources. That there are superfluous schools in the country no one can deny, and the death of three or four under present circumstances would be no loss to the profession or the public; but if all could be furnished with suitable clinical and scientific equipments, they would then prove a source of strength, not of weakness. Dependent solely

on class fees, the smaller schools, even with the self-sacrifice of professors which I know of, in many instances, cannot hope to keep up with the modern requirements in medical teaching, and in the larger schools, with their increased expenses and increased salaries, are really not much better off. The time has come when we should lay clearly before the public the needs of higher medical education. The full development of a school cannot be reached without extraneous aid. To build laboratories and provide costly apparatus require sums quite outside the power of the faculties or the professors to supply. We should learn a lesson from our brethren of the clergy. Ask in Toronto and Montreal the purpose of so many beautiful and costly buildings clustering about the universities of these cities, and we are told they are the divinity schools, in many instances erected at the cost of individual donors. The number of men in this country is rapidly increasing who have money to give where they see it is needed and will be profitably employed; and if those interested in medical education bestir themselves actively, suitable endowment can be obtained. We have not asked before—in careless unconsciousness of our needs—but we must ask now and ask earnestly. The successful appeal for $100,000 made last year in Montreal is at once an indication and an encouragement. There are strong, enlightened men among us, like the Hon. Donald A. Smith, who feel, with Descartes, that the hope of the amelioration of many of the ills of humanity lies within our profession, and that it is a public duty and privilege to assist in making our colleges true seats of learning, as well as schools of sound instruction.

3. *The Medical Society.*—In a young country the organization of the medical societies is associated with serious difficulties. In cities, practitioners can easily meet together; but in communities scattered over a wide extent of territory, like Canada, general societies are not readily established. Thus we find that several attempts were made to organize a Canadian Medical Association, but without success until the confederation of the provinces in 1867. In 1845 the Medico-Chirurgical Society of Montreal sought to secure a Provincial Medical

Association, and called a conference of delegates from the societies in the city and district of Quebec and the district societies of Niagara and Toronto. A meeting of the delegates was held on the 20th of August, but the scheme was unfortunately frustrated. In 1850 the same society again sought to unite the profession of Canada in a British-American Medical and Surgical Association, and on July 10th, at Three Rivers, a preliminary meeting was held, at which a constitution and a short code of by-laws were adopted. Dr. Morrin, of Quebec, was elected president, and Dr. Hall, of Montreal, secretary, and the first general meeting was arranged to take place in Kingston on the second Thursday of May, 1851. I do not know that it was ever held ; the journals of the day are silent on the subject.

At the instigation and call of the Quebec Medical Society, a meeting was held at Laval University on October 9, 1867, to consider the advisability of establishing a Canadian Medical Association. The organization was successfully effected, and the first meeting was held in Montreal in 1868 under the presidency of Doctor, now Sir Charles, Tupper.

Among the objects which the promoters sought to effect by united effort was satisfactory and harmonious medical legislation, and we find that, for the first four four sessions, the time of the association was chiefly occupied with the framing of a Dominion medical bill, which ultimately proved an impracticable measure, and was dropped. The subsequent meetings have been devoted to more legitimate topics of discussion, and we have reached a truer conception of the objects of our annual gatherings. We are all agreed, I think, that the highest work which an association such as ours can undertake is the promotion of the scientific and practical aspect of the profession. To these meetings the best minds among us should bring their best thoughts, that, by the reading and discussion of papers, we may be mutually benefited. Every member can bring something. One great attraction in our profession is its freshness and novelty. Each one of us has had, since our last meeting, opportunities for the study of problems in disease, new, perhaps unexpected, and which may not occur to us again. Material

for original work and research lies in the daily round of each one, awaiting only the spirit of patient and earnest inquiry, lacking which we cannot wonder that men deem the practice of medicine dull, stale and flat. Every one should come to learn, and of necessity bring with him something he can teach, for in some points his experience supplements what is wanting in another's. To our gatherings all teachers in our schools should come to meet their brethren and give to them an account of their stewardship—for do they not hold their positions in trust?—and show by their work and ways that they merit the confidence reposed in them. The more we foster the scientific features of our gatherings, the more successful will the association be. It has been so with our sister associations in Great Britain, and in France and Germany the corresponding societies form sections of the general associations for the advancement of science, and the meetings are devoted exclusively to work.

By no means the smallest advantage of our meetings is the promotion of harmony and good-fellowship. Medical men, particularly in smaller places, live too much apart and do not see enough of each other. In large cities we rub each other's angles down and carrom off each other without feeling the shock very much, but it is an unfortunate circumstance that in many towns, the friction being on a small surface, hurts and mutual misunderstandings arise to the destruction of all harmony. As a result of this may come a professional isolation with a corroding influence of a most disastrous nature, converting a genial, good fellow in a few years into a bitter old Timon, railing against the practice of medicine in general and his colleagues in particular. As a preventative of such a malady, attendance upon our annual gatherings is absolute, as a cure it is specific. But I need not dwell on this point—he must indeed be a stranger in such meetings as ours who has not felt the glow of sympathy and affection as the hand of a brother worker has been grasped in kindly fellowship.

There is special need in this country for such an association. With scattered and isolated provinces, self-governing, and regulating their own affairs, this organization is the sole bond of professional union. At these meetings we are neither of Ontario,

nor Quebec, of Manitoba nor Nova Scotia, but of Canada, and the narrower provincial spirit is lost in a wider national feeling. In the future development of the profession this body must take an ever-increasing share. It has difficulties to contend with of a geographical nature, as the distances between our provinces are so great, but these must not be considered. A peripatetic association always labors under certain disadvantages, but these we have in common with similar bodies in other countries. The provincial medical societies which have been established supplement the work which we do, and are a source of strength. We regret that there are still one or two provinces without such organizations. The district societies throughout the country are becoming more and more vigorous, and physicians are everywhere recognizing the advantage of coöperation in the study of our profession.

Let me refer to two other matters in conclusion. In selecting the place of meeting the association should be guided by what is thought best for the interests of the profession, and it should be distinctly understood that when we meet at any place the sole business of the local profession is to arrange suitable accommodation; and this association must set itself strongly against past practices by which the profession of a place has been heavily taxed for entertainment. In this we should follow the practice of the British Medical Association, at the meetings of which all the members subscribe to an association dinner, and I should ask for the re-appointment of the committee to revise the by-laws and constitution, as there are certain changes which will facilitate the work of our meetings and which should be brought up for discussion at as early a date as possible.

And now, gentlemen, I have done, and there remains but the expression of my thanks for the kind attention you have given to a very matter-of-fact address; but I cannot part with you on this occasion without assuring through you, my brethren in Canada, that, although no longer of them, I am still with them in spirit, with them in their persistent efforts to advance the higher interests of our profession, and united with them by a thousand bonds of fellowship and friendship, which absence shall not weaken nor time efface.

Correspondence.

VIENNA, August 4, 1885.

A stay of two months in Vienna, especially if the time be devoted to attendance on courses on a special subject, affords a fair insight into the principle on which the clinical teaching is conducted.

The writer was the fortunate possessor of letters of introduction to the leading laryngologists, which proved of service in many respects.

Of the four kliniks for diseases of the nose and throat, three are situated in the Krankenhauses, and the remaining one is held in the neighboring Poliklinik. The hours of attendance are so arranged that they do not conflict in any way. From 8 a.m. to 1 p.m. may be spent by the student of laryngology in almost uninterrupted attendance on these courses. The supply of material is varied and apparently inexhaustible, though, after some weeks, one perceives that the same patients constantly return, at regular intervals. This is accounted for by the fact that especial attention is paid to the requirements of the student, and cases presenting the more interesting types of disease are encouraged to make frequent visits. The class of cases are of a more aggravated nature than are ordinarily seen at the Throat Clinic of the Montreal General Hospital, Nasal disease (if we except growths, syphilis and lupus) is much less common than in Canada, where a very large proportion of all pharyngo-laryngeal disease depends for its permanent relief upon the treatment of unhealthy conditions of the nose or its lining membrane. Laryngeal phthisis is of frequent occurrence ; indeed tubercular consumption is considered *par excellence* the disease of Vienna. The great daily variations of temperature are held to produce this unfortunate tendency, and this is no doubt aggravated by the prevalence of unpleasant winds carrying before them clouds of fine dust, which is found to be particularly irritating to the respiratory mucous membranes.

The instruction at the Vienna Klinik is of a most painstaking and practical character. The blackboard is used freely, as are also models and anatomical as well as pathological specimens.

The almost entire absence of didactic teaching is noticeable, and the substitution therefor of case teaching is equally remarkable. The Germans possess a facility for illustration almost peculiar to themselves, and one which teachers of other countries would do well to cultivate. The teacher seems to know exactly what the student wants and how he wants it, and practically puts himself in his place.

The Vienna laryngologists excel in point of diagnosis, as also in an ultimate knowledge of the pathological conditions to be met with. In the matter of scientific labor-saving apparatus, and in the treatment of affections of the nose and throat, it may be fairly conceded, however, that the American school is not second. Perhaps the great manipulative skill of our German colleagues may to some extent render more elaborate appliances unnecessary.

One cannot but observe, on the part of professors and assistants here, an absence of roughness or violence in handling that is particularly gratifying. This gentleness is not, it is said, a characteristic of the German school in other departments, but it is a lesson that all laryngologists must learn if they seek success. Cocaïne is not extensively resorted to in the nose and throat clinics, probably on account of its cost. When used in the larynx, a 20 per cent. solution of the hydrochlorate is employed, and Merck's preparation is preferred. Education of the parts to tolerate instruments is generally adopted, and no apparent regard for the length of time necessary for the accomplishment of this is entertained. The line of treatment, generally speaking, is less radical than in America, where patients are more restless under cure than in the more easy-going European centres.

There also seems a general absence of *detailed* record of a vast amount of material which, if published, would greatly enrich our, in some respects, meagre laryngological literature. The amount of work imposed upon the staff will account for this, as also, perhaps, a disinclination to emulate what they so unsparingly condemn in their Transatlantic brethren—the cacoethes scribendi.

G. W. M.

Reviews and Notices of Books.

The Climate of Canada, and its Relations to Life and Health.—By W. H. Hingston, M.D., D.C.L., &c., Member of the Imperial Leopold Academy, &c. Montreal: Dawson Bros.

This subject is one to which it is known that the author has been giving some attention for several years. The actual meteorology of the various sections of this country has had many observers, and the first part of the book is devoted to a resumé of the most reliable accounts which have, at various times, been published. To give a clear account of the climate of such a country as this, covering, as it does, an enormous extent of the earth's surface, and at the same time including parts so utterly dissimilar as Nova Scotia and Manitoba, is by no means an easy task. We have here, however, a fair presentation of the general character of the varying seasons throughout the Dominion. To foreign readers it will no doubt convey a good deal of interesting information. Part the Second, which deals with the influence exerted by this climate upon the inhabitants, involves a discussion of many matters of much greater difficulty. It requires careful and extended observations over a series of years, with masses of statistics, to determine with any accuracy the effects of climate upon the health and longevity of the inhabitants. The general conclusion is that Canada is a healthy country, that the present occupants are probably, as a race, an improvement upon their forefathers, and may improve still further. We may admit these general statements, but can hardly believe that a few experiments instituted by the author demonstrate that the French-Canadian race surpass in physical power their English-speaking compatriots. Whilst agreeing in the main with the remarks made anent the various diseases which prevail in this country, there are some inaccuracies which we cannot allow to pass unnoticed. The author, although in connection with the largest French hospital in the country, makes this statement: "There is an affection to which at least the French-Canadian portion of the population of Canada

is a stranger—hysterical affections." Now, in our experience, the contrary is the case, for the most aggravated cases of hysteria we have ever met with have been amongst French-Canadian women, and these are, as a class, we think, more than most others liable to various hysterical disorders. Again, we cannot agree with the writer in attributing such evil consequences to cold affecting the feet. He says: "I have many times known fatal laryngitis to follow quickly on the sudden exposure of the bare feet to severe cold." In this country, as elsewhere, fatal acute laryngitis (simple) is a very rare disease, and the part played by cold applied to the soles of the feet is surely problematical. The same affection is also said to have followed "deep inspiration of air of a very low temperature," but only when the person has drawn the air through the mouth and not through the nostrils! We are not aware of the facts upon which these statements are based. We cannot help thinking that to persons outside of Canada, they are calculated to convey a very erroneous impression of the effects witnessed during our winter weather. Dr. Hingston wages war upon drinking and smoking, upon the amount of strong food daily consumed and the rapidity with which it is swallowed, and various other bad habits to which this community is more or less addicted. Amongst the peculiarities of the French-Canadian is mentioned his *penchant* for physic. With them, it is said, "a brisk purgative is a necessary preliminary to other treatment." Except the physician instantly prescribes a cathartic, "confidence cannot be retained!" Amongst other points in which our French-Canadians are said to excel all other nationalities is their capability of taking and requiring enormous doses of physic—the explanation given being that the "dryness of the tissues has much to do with this tolerance of cathartics."

Whilst we think that a complete account of the climates of Canada—for there are several—remains yet to be written, this contribution will be found of interest, introducing many subjects which are treated of from the point of view of a Lower Canadian and an admirer of the French-Canadian portion of our population.

Minor Surgical Gynæcology.—By Paul F. Munde, M.D. Second edition; revised and enlarged. New York: Wm. Wood & Co.

Dr. Mundé is well known as the able editor for many years of the *American Journal of Obstetrics*, and the contributor of numerous valuable papers to that and other medical journals of the day. Subscribers to Wood's Library will remember the first edition of this work as one of the series for 1880. Dr. Mundé's book at that time filled an important gap in the literature of the specialty, at least so far as the English language is concerned. In German, Chrobak's Untersuchen der Weiblichen Genitalien und Allgemeine Gynäcologische Therapie had already met the necessities of the case. To this work Dr. Mundé expresses his obligation for aid in the preparation of his own book. Of text-books and larger treatises on the diseases of women there have been no lack, but rather the contrary, for many years, but they nearly all failed to give instruction in a multitude of details of diagnostic and therapeutic manipulations. Our author, like every man imbued with the proper spirit, believes that attention to details is the secret of success. Hence his motto, a quotation from Emmet, in the preface of the first edition: "Success in the treatment of diseases of women lies wholly in attention to minute details." The object, then, of the work is to instruct men who have never had practical experience at hospitals or clinics for women, in many little matters of examination and treatment. And this is the lot of all but a favored few. It is a difficult and laborious matter to teach gynæcology practically. It is hard to get the material, and it is laborious in the extreme for the teacher, because of the time it takes to do justice to the average student. Dr. Mundé's book, faithfully studied, will greatly ease the task of teacher and pupil. We are much impressed with its value, and are not surprised to hear that such was the opinion of many others, as shown by the rapid sale of the first edition. The first part of the book is devoted to case-taking, methods of examination, position of patient, examining tables, &c. Every means of diagnosis, without and with instruments, is carefully explained and copiously illustrated. In this

part of the work we are pleased to see that in the present edition the author has omitted reference to, and illustration of, many of the plurivalve specula so treated in the first, and that, on the other hand, more attention has been given to the incomparable instrument of Sims and some useful modifications of it. One of these, the Mann's or Thomas's, which we have used for several years and find very valuable, is not alluded to by the author. The second part of the work includes a description of minor gynæcological manipulations and applications, catheterization, dilatation of urethra, vesical injections, applications to vagina and cervix, vaginal injections, tamponade of vagina, applications to the endometrium, dilatation of the uterus, curetting of the uterine cavity, local depletion, injection of medicines into the tissues of cervix and vagina, replacement of uterus and ovaries, pessaries, and hypodermic injection of ergot. Each of these subjects is carefully, minutely and, in general, we believe, judiciously discussed. The third part (added in the present edition) includes a general and most sound discusion of the subject of gynæcological operations and a thorough consideration of the subjects of lacerations of the cervix and perineum, of rectocele, cystocele, and prolapsus of uterus and vagina, and of the best approved operations for their relief or cure. These articles, especially those on the cervix and perineum, are nearly, if not quite, the best we know of. The significance of ruptured cervix is a subject about which there is still a wide divergence of opinion. That the operation for its cure has been and is still by many performed unnecessarily must be admitted by all judicial minds conversant with the subject. A careful study of Dr. Mundé's chapter will, better than any other description (Dr. Emmet's own not excepted), enable the practitioner, so far as books can teach him, to take the right course. The details of preparatory treatment and of the mode of performance of the operation are given more minutely and intelligibly than by the distinguished master himself.

The book consists of 539 pages octavo, and there are no less than 321 illustrations. These are tolerably well executed in the great majority of cases. Many are original by the author, and

of great merit. The descriptions of the numerous procedures are remarkably clear, and the whole literary style of the book is admirable. No medical man practising gynæcology can afford to do without this work. Not only is he therein taught much of what to do and how to do it, but he is warned by no uncertain sound when to refrain from procedures which, under certain circumstances, may endanger the life of his patient, or make her last state worse than the first.

A Text-Book of Physiology.—By M. Foster, M.A., M.D., F.R.S. Third American from the fourth and revised English edition. With extensive notes and additions by Edward T. Reichert, M.D. With 271 illustrations. Philadelphia: Lea Brothers & Co.

Dr. Reichert has supplied what Foster's work, unequalled as a scientific treatise on physiology, required to make it better suited to medical students, inasmuch as the latter generally commence the study of physiology with either none or the most limited knowledge of general anatomy and histology. The American edition is all that the English edition is, plus these valuable and almost indispensable additions of anatomy, coarse and fine, well illustrated by plates. The book is also in more portable form than the English work, and for these and other reasons will be received by both teachers and students in this country with unusual satisfaction.

The Essentials of Histology, descriptive and practical; for the use of Students.—By E. A. Schafer, F.R.S., Jodrell Professor of Physiology in University College. London: Longmans, Green & Co.

The present book is all it pretends to be, and is in every way worthy of its learned author. It furnishes exactly what the student of histology requires; and while sufficiently full, up to date, and accurate, is not unduly burdened with details either histological or technical. The plates are excellent, and the book attractive in appearance, suggesting neatness and solidity. It seems to us by far the best book for students that has yet appeared on this subject.

Books and Pamphlets Received.

Clinical Studies on diseases of the Eye. By Dr. Ferdinand von Ritter Arlt. Translated by Lyman Ware, M.D. Philadelphia, P. Blakiston, Son & Co.

Six Lectures upon School Hygiene. Delivered under the auspices of the Massachusetts Emergency and Hygiene Association to teachers in the public schools. Boston, Ginn & Co

The Management of Labor and of the Lying-in Period. A guide for the young practitioner. By Henry G. Landis, A.M., M.D. Philadelphia, Lea Brothers & Co.

Insomnia and other Disorders of Sleep. By Henry M. Lyman, A.M., M.D. Chicago, W. T. Keaner.

The Wasting Diseases of Infants and Children. By Eustace Smith, M.D., Lond. Fourth edition. New York, Wm. Wood & Co.

Kirke's Handbook of Physiology. By W. Morant Baker, F.R.C.S., and Vincent Dormer Harris, M.D., London. Eleventh edition. Vols. I. and II. New York, Wm. Wood & Co.

On Renal and Urinary Affections. By W. Howship Dickinson, M.D., F.R.C.P. New York, Wm. Wood & Co.

A Practical Treatise on Nasal Catarrh and Allied Disorders. By Beverley Robinson, A.M., M.D. Second edition. New York, Wm. Wood & Co.

Elements of Modern Medicine, including Principles of Pathology and Therapeutics, with many useful memoranda and valuable tables for reference. By R. French Stone, M.D. New York, D. Appleton & Co.

Inebriism, a Pathological and Psychological Study. By T. L. Wright, M.D. Columbus, O., Wm. B. Hubbard.

Urinary and Renal Derangements and Calculous Disorders. Hints on Diagnosis and Treatment. By Lionel S. Beale, M.D. Philadelphia, P. Blakiston, Son & Co.

Poisons, their Effects and Detection. By Alexander W. Blyth, M.R.C.S. New York, Wm. Wood & Co.

A Treatise on Asiatic Cholera. Edited and prepared by Edmond C. Wendie, M.D. New York, Wm. Wood & Co.

Society Proceedings.

CANADIAN MEDICAL ASSOCIATION.

The eighteenth annual meeting of this Associatian was opened in Christ Church Sunday School, Chatham, Ont., Sept. 2nd, at 10.30 a.m. Letters of regret were read from Dr. Brodie, the President of the American Medical Association; from Drs. Campbell of Seaforth, D. Clarke and Geikie of Toronto, Hingston and Alloway of Montreal, Kerr of Winnipeg, Vaughan of Ann Arbor, and Nattress of Toronto.

The retiring President, Dr. Sullivan, introduced the President elect, Dr. Wm. Osler of Philadelphia.

Dr. Bray, chairman of the Committee of Arrangements, welcomed the Association on behalf of the profession of Chatham, and Mr. Woods on behalf of the citizens of Chatham.

The minutes of the last meeting of the Association were read and confirmed.

Drs. Lundy, Connor and Walker of Detroit, delegates from the American Medical Association, were cordially welcomed and invited to take part in the active scientific work of the Association.

The following gentlemen were elected members of the Association: Drs. Fleming, McKeough, Hall, Sievewright, Backus, of Chatham, Caw of Parkhill, Patterson of Harrowsmith, Stewart of Wallaceburg, Brooks of New Hamburg, Hunt of Williamstown, Hoare of Strathroy, Ellis of Tilbury, Duncan of Toronto, and Ferguson of Merlin.

The report on Climatology and Public Health, by Dr. Yeomans, the chairman of the Committee, was read by the Secretary.

Afternoon Session.

The President took the chair at 3 p.m.

The minutes of the last meeting were read and confirmed.

The President then delivered his address.. (*See page* 129.)

Dr. Grant of Ottawa moved, and Dr. Thornburn of Toronto seconded, that the thanks of this Association be tendered to Dr. Osler for his able address. *Carried.*

The following gentlemen were unanimously elected members of the Association: Drs. Abbot of Comber, McCully of Buck-

horn, Wilson of Bothwell, Sampson of Blenheim, Pickard of Thamesville, O'Keefe of Tilbury, Teskey of Toronto, Haig of Oshawa, McAlpin of Parkhill, R. A. Clark, Pomeroy, Irving of Kirkton, and Eberts of Chatham.

Moved by Dr. Sullivan, seconded by Dr. Edwards, that the Nominating Committee be composed of Drs. Ross and Wilkins, Montreal; Drs. Reeve and Sheard, Toronto; Dr. Grant, Ottawa; Drs. Tye and Fleming, Chatham; Dr. McDonald, Hamilton; Dr. Burt, Paris; Drs. Eccles and Edwards, London; Dr. Harrison, Selkirk; Dr. Lumley, Glencoe; Dr. Stevenson, Strathroy; Dr. Sloan, Blyth; Dr. Sullivan, Kingston.

The meeting divided into medical and surgical sections.

Medical Section.

Dr. Harrison in the chair.

Dr. Grant, of Ottawa, read the report of an interesting case of *Aneurism of the Aorta*. The patient was an old soldier who had suffered from thoracic pain and other symptoms. The disease was readily diagnosticated, and he was under observation for a long time, during the greater part of which he was able to do light work. A large projecting tumor was watched, bulging the sternum and costal cartilages, and ending by eroding these and forcing itself forwards as a mass as large as two fists. He finally died from cerebral embolism.

Dr. Geo. Ross remarked upon the fact that this man had lived a long time—nearly five years—from the onset of symptoms. In the treatment of the case moderate exercise had always been allowed. Dr. Ross believes strongly in insisting upon complete rest for a sufficient length of time, although the present example shows that this is not always necessary to secure a remarkable degree of longevity. The reason here for the long time the man lived was plainly that the aneurism grew from the front of the aorta and pushed forwards, thus avoiding the important centrally-situated structures. Dr. Ross inquired if the physical sign of "tracheal tugging" had been observed.

Dr. Grant said it had not been looked for.

In answer to a member, Dr. Ross explained the method of examination to detect "tracheal tugging," and said that he

considered the sign one of great value in the diagnosis of aortic aneurism. If present, it seemed to be almost pathognomonic, for he had examined for it in a great number of hospital patients, and had never found it distinctly marked in any one who was not the subject of this disease. It is quite true, however, that it is absent in many cases of aneurism, for the conditions necessary for its production are, that the tumor bear against the trachea or a large bronchus, and, secondly, that it be not completely solidified.

Dr. Sheard spoke of a case recently under his care. The tumor sprang from the first part of the arch, and the symptom most marked was dyspnœa in severe paroxysms from spasm within the larynx. Prolonged rest appeared to have had a very beneficial effect; this was strictly enforced for three months. Dr. Sheard had used the potass. iodid. in pretty full doses, but its employment was always followed by marked depression and lowering of the pulse—so much so that it had to be discontinued. He thought this action of the drug unusual. Dr. Sheard also gave the particulars of a case of aneurism in the descending thoracic aorta which produced plugging of all the great vessels beyond its point of origin.

Dr. Osler remarked upon the importance of considering the question of prognosis in these cases. Dr. Grant's case, for instance, had lived five years and a half, and he had known men with large tumors live ten years and more. On the other hand, a small aneurism may quickly burst and prove fatal; so much depends upon the location of the growth—those growing anteriorly may attain large dimensions before producing symptoms, and even then life may be prolonged, whilst a small tumor centrally situated generally soon makes its presence known, and is apt to kill within a short time. Those growing from the transverse arch and backwards are likely to produce early symptoms, and quite frequently early death. Those, again, involving the descending part of the arch may last very long. He would also in this case notice the coexistence of disease of the aortic valves, which was by no means common. The absence of any marked degree of hypertrophy of the ventricle was in accordance with what is generally seen. As regards

iodide of potassium, he was satisfied of its great power in relieving the pain so frequently present, but has great doubts as to its assisting in the consolidation of the tumor.

Dr. Wilkins spoke of the necessity for limiting the amount of fluid to be allowed to these patients, and alluded to a case of his own in which this principle had been acted upon, and where the man had lived between four and five years. He would advise reducing the allowance to half a pint *per diem*. He thinks that the necessary result of free imbibition of fluids is distension of the sac for the time being, a condition, of course, unfavorable to cure. In the case alluded to the "tracheal tugging" had been a marked sign, and the patient died from rupture into the trachea.

Dr. Eccles alluded to a case where he had been obliged to omit the use of iodide of potassium on account of its always rendering the pulse very small and frequent.

Dr. Worthington then reported some cases of *Epidemic Cerebro-Spinal Meningitis*. He remarked that though the cases he related were indicative of a cerebro-spinal fever, and seemed identical with the so-called epidemic form, they were not sufficiently numerous to show that the disease was extensively prevalent. The notes were then read *in extenso*. The first showed a markedly intermittent type, and it was thought that here, as according to Dr. Radcliffe sometimes occurs, the specific disease was complicated with ague. The other cases were characterized by rapid onset, rigors, headache, rachialgia, convulsions, spasms and delirium, and later on somnolence and diplopia. They presented a considerable degree of similarity. The treatment consisted in mercury and iodide of potassium, with application of cold. In later stages, quinine and stimulants.

Dr. Harrison said that it was somewhat remarkable how this disease showed itself in certain restricted localities. He had had six cases, and Dr. Stack, in his neighborhood, seven, four of which had proved fatal.

Dr. Osler said that in the absence of *post-mortem* records, it was impossible to be certain of the diagnoses. The cases he had met with in cities and elsewhere were all *sporadic*. Those

which he had examined autopsically he found to belong to one of two classes, (*a*) simple and (*b*) tubercular. The former were rare; the latter were distingnished by a more prolonged course, and by being sometimes actually latent. He had recently had charge of a sailor, who having fallen heavily upon the deck of his ship, soon after developed spinal symptoms which were supposed to be due to the injury. The autopsy, however, showed tuberculization of the spinal and cerebral meninges, almost certainly of pretty long duration. The specific fevers also not unfrequently simulate cerebro-spinal fever, especially the malignant form of smallpox and of typhoid fever. The symptoms in all these cases are almost, if not absolutely, identical, and an autopsy alone can set a doubtful case at rest.

Dr. Teskey related a case of tubercular trouble he had lately had which might, during life, have readily passed for one of cerebro-spinal fever. It began with convulsions, followed by opisthotonos and then coma. The necropsy showed tubercular meningitis complicated by an abscess in the occipital lobe of the brain.

Dr. Macdonald, of Hamilton, spoke also of the necessity for *post-mortems*, and deplored the tendency amongst country people to object to this proceeding. During epidemics of cerebro-spinal fever in Hamilton, he had a number of autopsies. Whenever the diagnosis proved correct, he had found distinct evidences of inflammation of the cerebral and spinal meninges without any tubercle. In several cases the negative conditions discovered pointed to some specific febrile poison as having caused the symptoms.

Dr. Arnott, of London, Ont., read a paper on *The Sources of Malaria.* The existence of malaria is very generally taken as equivalent to presupposing the existence in the same place of a certain germ. It is commonly accepted that one of the chief requisites for malaria is decomposing vegetable matter. The only circumstances required for this to take place, and, therefore, for the generation of malaria, are thought to be the presence of water, exposure to air, and a certain temperature. Dr. Arnott thinks that decomposing vegetable matter is *not* necessary, but that with water and the necessary degree of

heat the germ of malaria will be propagated. He thinks, therefore, it is conceivable that this might take place even in distilled water. Many arguments were deduced in support of this view. In different districts the prevalence of ague is not at all proportionate to the amount of vegetable matter in a decaying state. One may find the latter in great abundance with hardly any intermittent, whilst, *vice versâ*, malaria may abound where decaying vegetable structures may be said not to exist, or to be very sparingly present. Loomis believes that malaria is proportionate chiefly to the heat and moisture without reference to the organic matters. The effect of drainage of land is well known. Phthisis and cholera will thrive under the same physical conditions as give rise to malaria. The writer again emphasized the opinion that heat and moisture are really the only essentials required to propagate malaria independent of the presence or absence of organic matter.

Dr. Ingalls, of Detroit, remarked upon the conditions present in that city. There, the parts built upon consist of a black organic mould, six or eight inches deep, underlaid by a heavy clay subsoil. The superficial drainage is very often defective, and moisture is retained beneath the houses for a long time. This gives rise to many diseases of a malarial type : true intermittent fever, phthisis, diphtheria. Sunlight probably plays but a small part. These malarial diseases prevail when the damp, decaying vegetable loam lies under the houses, obtaining only the heat from the general atmosphere. Do we not often fail to recognize malaria in the causation of phthisis, overlooking altogether the miasmatic origin of the latter ?

Dr. Teskey said, as regards the bacterial origin of malaria, the points chiefly urged in favor of the view were, that successful inoculations had been made upon animals ; and that upon curing the disease with quinine the bacteria had disappeared. The natural history of bacteria in general bore upon the subject under discussion. To cultivate bacteria, heat, moisture, and some nitrogen-bearing substance are necessary. Some get it from the atmosphere, some from albuminous bodies (broth, etc). Then, in almost every stream we should find spores and albuminoid bodies of some kind. When there is much vegetable

matter, there is generally much albuminoid matter. There is certainly much yet to be known of the natural history of these particular germs.

Dr. McCully alluded to the persistence with which malarious affections stick to certain houses. There is always some one sick in them. Often, on examining such premises, one finds decaying timbers and low sills. In these places typhoid fever and diphtheria may alternate with the true malarial affections.

Dr. Baker, of Detroit, spoke of the system in vogue in the State of Michigan. The Board of Health receives reports regularly from one hundred physicians in different sections. On comparing these it is found that malaria prevails most when the fluctuations of temperature are greatest, therefore temperature alone seems to control intermittent fever. The difference between the day and night is greatest in summer—it increases as you go south. In the northern part of the State there is no ague. He would strongly urge their system of collecting facts bearing on this disease ; it is the only way in which our knowledge can be helped on. He does not consider that the bacillus can yet be accepted as proven.

Dr. Harrison said that in old times, in his part of the country, all the cases of pneumonia had a malarial tendency. Now this was not observed, and there was no ague there.

Dr. Stalker mentioned the occasional occurrence of severe attacks of ague during the greatest cold of winter, as opposed to the view that a certain temperature is necessary.

Dr. Geo. Ross held that to benefit by this discussion we must restrict it to that of malaria alone. Such affections as some had spoken of, phthisis, typhoid, and diphtheria, were all believed now-a-days to be produced by special organisms, having a natural history of their own. In many places these prevailed to a very considerable extent, whilst malaria was unknown. It was clear, therefore, that it would not do to quote their existence as indicative of miasmatic or malarial, although certainly of unwholesome, conditions.

Dr. Clark said that he had observed these facts in his neighborhood. Near Oakville there is neither phthisis nor malaria. In Oakville they both prevail. The temperature on the lake

shore is low, whereas two miles or so away inland it is comparatively warm.

Dr. Arnott, replying, said that the recent views of Loomis, quoted, showed that the current of general opinion is towards the view that the factor of decaying vegetable matter in the production of malaria is not an *essential* one. As regards occurrence of an attack of ague in midwinter, he thought that such cases are to be explained as showing the possibility of prolonged *latency* of the poison, the attack being induced by the depressing action of intense cold.

Dr. Holmes, of Chatham, read a paper entitled *Observations on Puerperal Mania*. The paper alluded first, in a general way, to the causes to which an attack of this kind may be attributed. They are chiefly heredity, anæmia, and moral influences. To these he would add another, viz., *laceration of the cervix uteri*. Some objections to admitting this would occur at once. Such as, lacerations are very frequent without the occurrence of mania, which is rare. Recovery from mania often takes place without laceration having been cured. True, but most lacerations heal of themselves, or, at any rate, without treatment, become covered with mucous membrane. Dr. Bucke has taught that the central sympathetic nervous system governs man's moral nature. Abdominal disease commonly produces great depression, in marked contrast to the hopefulness of those with thoracic disease. The pregnant woman is really like dry fuel, waiting only the application of a match to burst into flame. Case I.—Mania three days after confinement; put under restraint; moderate laceration of cervix; died insane after two years. Case II.—No heredity. Easy labor; after five days, melancholy and morose; after three months, much worse; suicidal; a laceration which was discovered was treated, and the mania disappeared rapidly. Case III.—Very violent; after two weeks was sane; remained despondent for two years; then laceration was found; restored to health. Case IV.—Became insane twenty days after labor; extensive laceration; treated with hot water douches, etc., and a rapid cure effected. Case V.—Was seen eight months after confinement; was weak, mind affected, melancholy; slight laceration treated; after four

months this was entirely healed, and she was quite well. Case VI.—Was in an asylum; after the cure of a bad laceration was well and went home. Twelve cases in all were presented, of which the above are fair specimens. Dr. Holmes concludes that he believes laceration of the cervix to be a frequent cause of puerperal mania, and one which has been hitherto overlooked. He thinks it is of much importance that there should be a gynecologist to every asylum for the insane, and that their investigations into this subject might throw much light upon the somewhat obscure etiology of this affection.

Surgical Section.

Chairman, Dr. Edwards of London, Ont. Secretary, Dr. Burt of Paris, Ont.

Dr. Carstens of Detroit read a paper on two cases of "*Removal of Uterine Fibroids.*" The first case was that of a woman aged 40, in whom uterine fibroid within the broad ligament was diagnosticated, and abdominal section determined on. The operation was performed with strict antiseptic precautions. On opening the abdomen, one large tumor was discovered within the broad ligament of right side and one small one. The ovaries were very adherent, and were removed. The pedicles were ligatured and the tumors taken away. There was considerable hemorrhage, and some twenty vessels had to be tied with silk and catgut. The patient for the first few days had considerable vomiting. On the fourth day she asked for lager beer, which was given, and had the effect of controlling the vomiting. The temperature up to the eleventh day never reached 100°F., but then rose to 102°. This elevation was caused by a small abscess, which formed in the course of one of the ligatures. The patient did well after this, and was discharged, cured, five weeks after the operation. The second case was that of a married woman, aged 45, who had had enlargement of the abdomen for several years, with repeated uterine hemorrhages. Dr. Carstens, on examination, found a submucous fibroid. The os uteri dilated with great difficulty, so a posterior incision had to be made. The tumor was enucleated and removed with an écraseur, and the

wound in the cervix sewed up with silk ligatures. The patient was able to sit up in six days.

Some remarks were made on the cases narrated, in which the reader of the paper strongly insisted on the necessity of an abdominal section in many of these cases, and said that, until the abdomen is opened, it is impossible to tell what may be the character of the operation it is necessary to perform.

In the discussion which followed, Dr. Gardner of Montreal said that in incising the cervix he preferred the bilateral incision to the posterior, and that in the cases performed by him he has avoided sewing up the wound thus made. After removal of the tumor, he is in the habit of irrigating the uterus with two tubes, which are kept in position by stitching to the cervix. He washes out the uterus through these tubes every two hours. In certain cases he is in favor of removing the ovaries, but not in all, as is advocated by Mr. Lawson Tait.

Dr. Carstens, in reply, said that section of the cervix is seldom necessary, as it can generally be sufficiently dilated to remove any ordinary tumor, and he has made a posterior incision only because it was most convenient in that particular case. If abdominal section was performed for uterine fibroid, he preferred excision of the tumor to removal of the ovaries and appendages, as by the latter method the growth of the tumor is frequently not arrested. He strongly insisted on the necessity of folding in the peritoneum after the excision of the tumor, as by this means blood is prevented from entering into the peritoneal cavity.

Dr. Fulton of Toronto then read a paper on "*Subperiosteal Amputation.*" This method of operating was advocated by Walthier seventy years ago; in 1859 it was advised by Ollier Lyons; and lately many surgeons have recommended it. Dr. Fulton has performed many amputations recently by this method, and is strongly in favor of it, especially in amputations for diseased bones and joints. After carefully describing the operation, Dr. Fulton mentioned its advantages, the chief of which is that the cut end of the bone is brought into contact with the tissue most suited to it; also, the bone does not become adherent to the end of the stump, and the medullary canal is closed by new bone. The operation is especially suitable in cases where the

contents of the medullary canal are soft and in an unhealthy condition. The only objection is the possibly too great development of osseous tissue about the end of the bone. The reader of the paper, however, had never seen any osteophytes result from the operation. Cases were related showing the advantages of the operation.

Dr. McGraw of Detroit remarked that Langenbeck had performed subperiosteal amputation in 1862; but, as the case did not turn out very well, he did not continue to adopt this procedure in his amputations. Dr. McGraw believed that it is most important in amputations to draw together similar tissues, and he always sews periosteum to periosteum, muscle to muscle. In this way the wound is completely closed and no cavity left. He strongly approved of the subperiosteal method of amputating.

Dr. Donald McLean of Detroit said that many of the so-called advances of modern surgery are of very questionable benefit, but the one recommended by the reader of the paper seemed to have much to recommend it. It is the duty of the surgeon to pay more attention to the details, not only of the operation, but of the after-treatment, and to make the path of the surgical patient as smooth as possible by doing everything to avoid unpleasant after-results.

Dr. Davidson of Toronto thought the operation should be more practised than it now is. He thought that in performing the operation the periosteum should be reflected back before the bone is cut, thus necessitating only one division of the bone. The occurrence of osteophytes is certainly an objection to the operation.

Dr. Sampson of Blenheim, Ont., said that country doctors are not always able to carry out all the minute details of modern surgery, and yet get very good results. He mentioned a case in which he had lately amputated the thigh, and the patient was going about on crutches within three weeks.

Dr. Shepherd of Montreal said that in his experience the results obtained in amputations performed with periosteal flaps are no better than in those performed without them; that if amputation be done with proper antiseptic precautions, union occurs by first intention, and the result is that the skin is freely movable over the end of the bone. In the last twenty major

amputations he had performed, only one did not unite completely by first intention. He thought that the suturing of muscle to muscle, as recommended by Dr. McGraw, is not necessary, as the same result can be obtained by dressing the stump with pads of jute, or some other elastic substance, and keeping them in place with an evenly and firmly applied gauze bandage.

Dr. Shepherd then read a paper on "*Excision of the Tongue by Scissors, with preliminary ligature of the Lingual Arteries.*" He said that in excising the tongue for malignant disease, besides the necessity for avoiding hemorrhage, it is important that structures in the neighborhood which had become involved should be removed, and he held that the operation of excision of the tongue with preliminary ligature of the linguals facilitates the removal without adding much to the risk of the operation. Whatever operation for excision of the tongue is practised, the mortality in a given number of cases is about the same, and the method of operating seems to have less effect on the results than the after-treatment. Still, certain operations are more favorable than others as regards the recurrence of the disease, as the more completely the disease is removed the less likely is it to return. He considered that in excision of the tongue it is as important to excise diseased glands in the neck as it is to remove diseased axillary glands in extirpation of the breast. The operation was described, and the difficulties met with in ligaturing the linguals especially dwelt on. The advantages of the operation are:— 1st, The diseased structures, and especially the glands, are easily discovered and removed through the incisions made for ligaturing the arteries. 2nd, The removal of the tongue is bloodless, and there is little fear of secondary hemorrhage. 3rd, Drainage of the mouth can be more thoroughly carried out by means of the incisions in the neck. 4th, The operation is performed with few instruments, and only those possessed by every surgeon. 5th, The tongue is more completely removed by scissors than in any other way, and the tissue is not bruised as when the écraseur is used. Dr. Shepherd related three cases of malignant disease of the tongue with involvement of the glands of the neck (and in one case of the right tonsil), in which he had performed this operation. The after-treatment is important, and

Billroth's method of stuffing the mouth with iodoform-gauze was strongly advocated by the reader of the paper.

Dr. McLean of Detroit said that in certain cases the operation described by Dr. Shepherd was the proper one, but when there is no involvement of the glands of the neck he prefers removing the tongue with the écraseur. The great danger of all the operations for the removal of the tongue is septic disease of the lungs.

Dr. Grant of Ottawa had listened to the paper with great interest, and intended, when a proper case presented itself, to practise the operation. He related a case of deep-seated abscess of the tongue which had lately been sent to him as one of malignant disease.

Dr. Atherton of Toronto did not think ligature of the lingual a very simple operation. He advocated the performance of preliminary tracheotomy in excision of the tongue, as by this means the wound is kept aseptic and septic involvement of the lungs prevented. There is also less fear of hemorrhage, and greater facility in arresting it.

Dr. Shepherd, in reply, said that he doubted whether diseased glands in the neck could be always discovered by external manipulation, and that only in cases seen very early should the neck incisions be omitted. He could not help thinking that preliminary tracheotomy added to the risk of the operation, and, besides, it is not necessary if the after-treatment with iodoform-gauze be carried out in the way recommended by Prof. Billroth, who has had no deaths or serious complications in his last seventeen cases.

Dr. Wm. Gardner of Montreal now read the report of a case of "*Double Uterus with Atresia and Hæmatometra of the left chamber.*" The patient, a tall, slim, unhealthy-looking maiden, aged 18, was admitted to the gynecological department of the Montreal General Hospital with a history of intense periodic pain in the loins, hips and hypogastrium. She had always been healthy till two years previous, when she began to grow rapidly and to menstruate. Catamenia always scanty; intervals three to six weeks. The flow attended with moderate pain. Nine months previous to entering the hospital she began to suffer from

the pains described. The pain came on each afternoon or evening, and lasted several hours, with an interval of complete relief. Had noticed for some time a swelling of the lower part of the abdomen. No bladder symptoms; appetite small; no vomiting; constipation troublesome. On palpation of abdomen, there is an elongated, smooth, very firm tumor extending from the left anterior superior spine of ilium to pubes. Two smaller projections attached to the larger one extend towards the right side of the pelvis. Patient etherized for vaginal and rectal examination. Hymen entire, but perforate. Immediately on entering the vagina the finger meets a very firm, smooth, at one point slightly elastic, mass, evidently the lower part of the hypogastric tumor described. On the left side the vaginal wall is pushed down by the tumor to near the orifice. On the right side and behind, the finger can be swept around the tumor to the upper part of the pelvis. No trace of vaginal portion to be detected. The only evidence of an opening is a slight linear furrow. An aspirator trocar was introduced, when a small quantity of thick chocolate-colored blood escaped, thus clearing up the diagnosis. A bistoury was introduced and a free incision made. Fifty fluid-ounces of thick, tarry blood escaped. After partial emptying of the sac it was easy to feel the os uteri of the left patent chamber of the uterus. Double drainage-tubes were inserted within the opening and stitched to the edges, the ends protruding from the vagina. Irrigation every two hours with weak carbolized fluid was ordered. Within the first twenty-four hours the temperature ran up to 103°, but at the end of another day became normal. Very little pain. Patient did perfectly well for a week, but on the eighth day the tubes ulcerated out. Within twenty-four hours the temperature slowly rose to 101°. The patient was again etherized, a portion of the wall of the sac excised, the tubes again inserted, and irrigation resumed. But the temperature and pulse continued to rise. Three days later there was a rigor, followed by profuse sweating; then increase of pain, abdominal distension, left infra-mammary pain and pleuritic friction; vomiting, at first of mucus, then of coffee ground-like fluid; death nineteen days after operation. At the autopsy, general recent peritonitis with profuse exudation of

lymph. Bicornuate uterus: left chamber measures 1¾ inches; the interior of the right chamber contained the thick menstrual blood-stained brown fluid. Right ovary somewhat enlarged, otherwise healthy. Left Fallopian sacculated, the sacculi containing the same tarry fluid. A similar sacculated collection of the size of an orange, the walls of the sac being formed by the fimbriated extremity of the tube, the broad ligament, and false membrane. Other smaller hæmatoceles were found about the left broad ligament and left border of the uterus. The left ovary could not be distinguished.

Dr. Gardner remarked upon the great rarity of the case. Professor Olshausen of Halle, Dr. Galabin of London, and Dr. John Homans of Boston, had, however, reported exactly similar cases. The prognosis in all such malformations is grave. The treatment, so far as it went, he believed to be the best that could have been adopted, but he regretted that when the condition of the patient became so desperate, he had not opened the abdominal cavity, removed the left Fallopian tube and ovary, opened the other hæmatocele collection, and drained the abdominal cavity. In view of certain recently published remarkable cases of acute and chronic peritonitis, similarly treated with success, he believed it possible that the patient might thus have been saved. Olshausen's case was treated by three successive tappings of the tumor through the vagina. Mild peritonitis resulted, but the patient recovered perfectly, and subsequently married and bore three children. In Dr. Homans' case, there being doubt as to the nature of the tumor, he opened the belly, clamped and removed the closed uterine chambers containing the altered blood, together with a diseased and distended Fallopian tube and ovary, and introduced a drain. The patient recovered. Dr. Galabin's case was treated similarly to Dr. Gardner's, but less efficiently on account of the intractability of the patient and her friends. She died within a fortnight.

Dr. Roswell Park of Buffalo reported a successful case of *Extirpation of the Larynx for Malignant Disease*, and exhibited the specimen, as well as a model of an artificial larynx after Gussenbauer's pattern. The case was that of a man aged 64, who for many years had been troubled with hoarseness. For a

year past he had lost his voice altogether ; consulted a specialist last fall, who diagnosticated papillomatous disease of the larynx undergoing cancerous degeneration. Had previously undergone several operations for removal of the papillomatous growths. He was seen by Dr. Park on the 14th of last June, and at that time tracheotomy was performed to relieve the difficulty of breathing. After some days the granulation tissue about the tracheotomy wound was so exuberant that it forced out the tube, so extirpation of the whole larynx was advised and agreed to by the patient. The operation was performed on the 28th of last June. It was very tedious, but attended with but little hemorrhage. The epiglottis was left behind, and the first ring of the trachea removed with the larynx. The wound was packed with iodoform gauze and healed rapidly. The patient was fed for the first few weeks by a tube passed through the wound. Since then he has taken all his nourishment by the mouth. He is now wearing an artificial larynx, and can swallow well and talk with ease. The removed larynx was exhibited and showed the malignant disease completely blocking up the rima glottidis. The affection was apparently confined to the larynx. Dr. Park said that up to the present time 94 extirpations of the larynx had been reported, and that this was the 95th, and the third extirpation that had been performed on this continent.

Dr. Atherton of Toronto then read a paper on two cases of "*Laparotomy performed for Uterine Myomata.*" In the first case the tumor was of considerable size and intra-ligamentous. The pedicle was first transfixed with pins and compressed with a rubber bandage ; the tumor was then removed by a wedge-shaped incision. The vessels were ligatured and the pins and bandage removed. The two edges of the stump were then sewed together and the abdominal wound closed with silk and catgut ligature and drained. The patient did well, recovering perfectly. There was a little suppuration about the wound. The operation was performed under the spray.

The second case was that of a young lady aged 35, who had had an enlargement of the abdomen for some years, with recurrent hemorrhages. The case was recognized as one of uterine fibroid. Medical treatment proving of no avail, the patient re-

quested that operative procedures should be undertaken for her relief. Dr. Atherton, on opening the abdomen, found a large tumor filling up the posterior part of the pelvis and firmly adherent. It was transfixed with needles and a rubber tourniquet placed below them; the adhesions were separated with the finger, and as the tumor was freed the rubber tourniquet was pushed further down. The adhesions were very extensive, and the hemorrhage troublesome. The tumor was removed by a wedge-shaped incision, as in the former case, and the edges of the wound brought together with silk and catgut. When the rubber tourniquet was removed there was free bleeding, and the patient suffered considerably from shock after the operation. The abdomen was closed in the usual way and a glass drainage-tube introduced. The operation was performed under the spray, and the wound dressed with carbolized gauze. The patient did badly, and was in such a weak condition on the third day that transfusion was performed, and the abdomen washed out with a 1 to 40 solution of carbolic acid, but she continued to sink after a short rally, and died on the fifth day after the operation. At the autopsy, gangrenous patches were found on the sigmoid flexure of the colon and the rectum. The uterine stump looked well, and there had been no hemorrhage.

In the remarks made on the two cases, the reader of the paper said that in cases of uterine myoma, when remedial treatment fails and oöphorectomy has not caused the tumor to diminish, the removal of the growth is indicated, especially in those cases where the system of the patient is running down. He had hopes that in the future the result of operations for removal of uterine myomata would be as favorable as after ovariotomy. He suggested that before the removal of these tumors the cervix of the uterus should be closed by a preliminary operation to prevent the entrance of germs. This would be a more scientific method than the use of iodoform suppositories or iodoform gauze.

Dr. Gardner congratulated Dr. Atherton on the success of the first case, and said that everything possible had been done in the second. He thought the suggestion made by the reader of the paper of closing the cervix was a valuable one.

Dr. Eccles of London, Ont., had listened with great interest

to the case, and said that the removal of part of the uterus with a myoma is a dangerous operation, and gives rise to great shock. He had once removed the uterine appendages and a fibroid in a woman aged 59. There was great hemorrhage, which was with difficulty arrested. The tumor was removed with a wire écraseur. The abdomen was drained, but there was free suppuration, and the wound did not close for some time. She eventually recovered.

Dr. Jenks of Detroit never had a case of recovery where there were extensive adhesions in Douglas's cul-de-sac. He thought that in these operations the preparatory treatment is most important. The bowels should not only be thoroughly emptied, but tympanites should be guarded against. Ten to twenty grains of ox-gall should be given daily for a week before operation, and rhubarb and soda on alternate nights, and the night before the operation the bowels should be well washed out with enemata containing ox-gall. This method had been very successful in his hands in preventing tympanites.

Dr. Roswell Park related a case in which he had assisted to remove a large fibroid of the uterus, and where there was great hemorrhage after the operation. The abdomen was reopened, the hemorrhage arrested, and the cavity washed out with antiseptic solutions. The patient made a good recovery.

Dr. Fulton of Toronto said that he also had great faith in clearing out the contents of the bowels to prevent tympanites. He thought that the method of drainage into the vagina has not been sufficiently tried, and believed it a most scientific and rational procedure.

Dr. Rutherford of Chatham now read a paper on "*Suprapubic Urination.*" After giving the causes of complete retention and stricture, enlarged prostate, etc., he went on to describe the suprapubic tapping with trocars, and the introduction of a soft catheter. He described four cases in illustration, where the operation had been performed for retention following enlarged prostate. In one of the cases the patient had been comfortable for four and a half years, urinating through the suprapubic opening. In another case the patient, after urinating for some time through the artificial opening, was able afterwards to pass his water by the natural passage.

Dr. Burt of Paris, Ont., read a paper on "*Internal Urethrotomy.*" He described the operation fully, and related cases in illustration. He used Maisonneuve's instrument. He said that he had never seen any evil results follow the operation, except in one case of penile stricture, where he had cut too deeply, extravasation followed. He had frequently operated most successfully in very severe cases and with permanent relief. He considered the operation to be easy of performance and safe, and that in most cases it was followed by permanent cure. He had operated on many cases of stricture after this method, and found that the cutting of these anterior strictures caused the spasmodic stricture of the deep urethra to disappear. The instruments used for detecting and cutting strictures were exhibited.

Dr. Shepherd said he could not altogether agree with Dr. Burt's views as to the necessity of internal urethrotomy in all cases of stricture. He himself had rarely found it necessary to perform this operation, as the cases needing it were few—such as penile stricture and resilient stricture. He preferred gradual dilatation in the treatment of stricture, and considered it a much safer procedure than internal urethrotomy, as the mortality in that operation, even in such skilful hands as those of Sir Henry Thompson, was 3 per cent. He did not believe in strictures that were detected by a No. 25 sound, and thought that Otis's urethrotome showed only that the urethra was less dilatable in some parts than others; and he thought that the good results following cutting in such cases are due to the moral effect of the operation in hypochondriacs.

General Meeting—Sept. 3.

The President took the chair at 10.30 a.m. The minutes of the last meeting were read and approved.

On a two-thirds vote, it was decided to consider the report of the Nominating Committee, which was then read by Dr. Sullivan. Their recommendations were:

President—Dr. Holmes, Chatham.

General Secretary—Dr. Stewart, Montreal.

Treasurer—Dr. Sheard, Toronto.

Vice-Presidents—For Ontario, Dr. Sloan, Blyth. Quebec,

Dr. C. Sewell, Quebec. New Brunswick, Dr. Earle, St. John. Nova Scotia, Dr. Wickwire, Halifax. Manitoba, Dr. Brett, Winnipeg.

Local Secretaries—Ontario, Dr. Wishart, London. Quebec, Dr. Bell, Montreal. New Brunswick, Dr. Lunam, Campbelton. Nova Scotia, Dr. Almon, Jr., Halifax. Manitoba, Dr. Good, Winnipeg.

COMMITTEES.

On Publication — Dr. Kennedy, Montreal; Dr. Fulton, Toronto; Dr. W. H. B. Aikins, Toronto.

Medicine—Dr. Cameron, Toronto; Dr. F. W. Campbell, Montreal; Dr. Saunders, Kingston.

Surgery—Dr. Kerr, Winnipeg; Dr. Kains, St. Thomas; Dr. Waugh, London.

Obstetrics—Dr. Holmes, Chatham; Dr. McKay, Woodstock; Dr. Campbell, Seaforth.

Therapeutics—Dr. Oliver, Kingston; Dr. Sloane, Blyth; Dr. Tye, Chatham.

Necrology—Dr. Fulton, Toronto; Dr. Graham, Toronto, Dr. J. C. Cameron, Montreal.

Education—Dr. Pyne, Toronto; Dr. Sheard, Toronto; Dr. Adam Wright, Toronto; Dr. Botsford, St. John; Dr. Allison, St. John; Dr. Arnott, London.

Public Health—Dr. Yeomans, Mt. Forrest; Dr. Grant, Ottawa; Dr. Harding, St. John; Dr. Robillard, Ottawa; Dr. Laberge, Montreal; Dr. Botsford, St. John; Dr. Playter, Ottawa; Dr. Covernton, Toronto; Dr. Oldwright, Toronto; Dr. Bryce, Toronto; Hon. Dr. Parker, Halifax; Dr. Kittson, Winnipeg.

Quebec was recommended as the next place of meeting.

The report of the Nominating Committee was unanimously adopted.

Medical Section.

This section opened at 11.30 a.m., Dr. Harrison in the chair.

Dr. J. E. Graham exhibited a specimen of *Dissecting Aneurism*, and related the history of the case. The patient had been a soldier in the British Army and was wounded in the trenches, and soon after was invalided and told to avoid exertion as he might die suddenly. Aneurism at the time was evidently suspected if not diagnosed. He recovered health sufficiently to enable him to earn his living, though never strong.

He had been under Dr. Richardson's care in Toronto Jail on several occasions, and it was known that he was the subject of thoracic aneurism. A few days before his death there was hemorrhage from the lungs. The condition found post-mortem was as follows :—The ascending and transverse portions of the arch were much distended, and immediately beyond the orifice of the left subclavian there was a saccular dilatation adherent to the lung, and at the upper part was a laceration into the tissue which communicated with the bronchial tubes. At the distal portion of the sac were two openings, one of which communicated with the natural lumen of the vessel and the other with the dissecting aneurism. This latter was formed by the blood finding its way through the middle coat of the vessel and dissecting the inner portion of the media from the outer half of the media and the outer coat. This was continued in almost the entire circumference of the vessel, and extended throughout the thoracic and abdominal portions to the bifurcation, where by a large opening the dissecting aneurism again communicated with the lumen of the aorta. Some of the branches of the abdominal aorta communicated with the inner tube, others only with the outer dissecting aneurism. Among the remarkable features of the case are (1) the length of time which this has lasted, probably thirty years at least; the condition of the lining membrane of the dissecting aneurism shows it to have been long in existence—as it is smooth and firm almost like the normal lining membrane, only a little uneven. (2) The unusual extent of the aneurism, involving the entire length of the thoracic and abdominal portions.

Dr. Wilkins presented a series of microscopical specimens illustrating the *Bacilli of Tuberculosis*, and the fact of their communicability. The first of these were taken from the sputa of a patient suffering from chronic phthisis; the second from the lungs of the same person; the third from a rabbit, which had been inoculated with the tuberculous matter in the anterior chamber of the eye. In each case the bacilli were extremely well shown, and the demonstration was much appreciated by the section. Dr. Wilkins read some notes descriptive of the experiments he had made on this subject, and pointing out how strikingly such observations exhibited the contagious character of tuberculous matter, and the association with it in every case of the characteristic bacilli which have been so fully described.

Dr. J. E. Graham said that he had been much interested in this very satisfactory and complete demonstration of the micro-

organisms of tuberculosis. It was a fact that some of the profession were still sceptical concerning these tubercle bacilli, whereas an examination of such specimens as these would carry conviction even to the mind of a layman without any special knowledge of the subject.

Dr. James Stewart read a paper on *The Curability of the Chronic Form of Infantile Paralysis (Poliomyelitis Anterior Chronica)*. In his case, the development of the paralysis had been slower and less febrile than in many instances observed, and had been preceded by diarrhœa. The patient was treated with galvanism, and made a good recovery. Dr. Stewart thinks that cases of this character are more amenable to treatment than those with more rapid and acutely febrile onset. He advised persistent and careful treatment with galvanism, instead of consigning them, as is so often done, to the category of cases for which nothing can be done.

Dr. Holmes considered the case of value, as encouraging the general practitioner to persevere, in the hope of ultimately restoring limbs threatened with permanent paralysis. He inquired whether any other form of treatment in addition was serviceable; also what the reader's views were as to the pathology of the affection.

Dr. Stewart, in reply, said that galvanism is the only thing to be relied upon. It is not definitely known whether the changes are primarily inflammatory or purely degenerative. As regards prognosis, it is important to separate the acute from the subacute and chronic cases.

Dr. McKeough, of Chatham, read a paper on *The Use of Pilocarpine in Puerperal Eclampsia*. Three cases were detailed, the principal features of which were as follows: Case 1—Patient, when seen, had had twelve convulsions, was comatose, and greatly œdematous; the urine loaded with albumen; an attempt at venesection failed; then pilocarpine was given hypodermically. There was profuse sweating, but at the same time copious bronchial secretion, with loud rattling. The condition became alarming, and she died three hours after. Case 2—At eighth month. Considerable œdema present; passed only one ounce of urine in twenty-four hours; gave purgatives and potash citrate with digitalis; had vapor bath. Eclampsia supervened; gave ʒj fluid extract of jaborandi with good effect. Convulsions continuing, gave morphia sulphate gr. $\frac{1}{4}$. No more convulsions. Case 3—Convulsions occurred the day before confinement; found semi-comatose; no œdema; urine solid on boiling; gave gr. $\frac{1}{8}$ pilocarpine hypodermically. At

night gave chloral. Next day had no return of convulsions, though she remained lethargic, and was successfully confined. Dr. McKeough considers the use of jaborandi in these cases only an experiment. Barker and Thomas think it is of doubtful service. The great depression it produces is against it, whilst in certain conditions the danger of pulmonary œdema and profuse bronchial secretion are great, as shown in Case 1. He thinks, from his experience, that it may prove of considerable benefit when used early in cases in which convulsions are likely to occur.

Dr. McLean said that, though most cases of puerperal eclampsia were uræmic, they were not all so. Some arise from peripheral irritation, and resemble the fits which children have from worms and other causes. A case of his illustrated this fact. A multipara, in whom the abdomen was much distended, had convulsions; there was no albumen in the urine. He gave chloroform and delivered; no more convulsions occurred. He considers chloroform the most valuable agent, as it allays irritation of the peripheral nerves and nervous system generally.

Dr. Whiteman was opposed to evacuation of the uterus. His practice is to leave the case to nature, except an emergency call for interference.

Dr. Geo. Ross said that the subject always commanded a lively interest. He thought that, in the treatment of puerperal convulsions, a wrong idea was often made its basis. It is said that the blood is poisoned by a foreign substance—urea, and this must be got rid of. This in itself is even yet an unproved hypothesis. At any rate, he believed that, convulsions existing, the primary object of the practitioner should be to allay the irritation of the nervous centres, independent of everything else; accomplish that, and the eclampsia will cease, and then you will have time enough to take steps for unloading the system and starting the action of freed kidneys. To allay this central irritation we must resort to narcotics, and especially morphia and chloral hydrate. On these principles, therefore, the employment of pilocarpine can only be looked upon as uncalled for, and in not a few cases actually dangerous. He agreed with McKeough, that it may be very useful in early conditions of albuminuria, or even after convulsions have ceased, but not as a treatment of the eclamptic paroxysms. He would draw attention to a point often omitted in text-books, viz., that prodromata of convulsions—early uræmic symptoms—should always be looked for and actively treated. These consist most frequently in severe headache and repeated vom-

iting. They can often be completely relieved by narcotic treatment, and convulsions *prevented*, whereas depleting measures do little good, except assisted by the narcotic. As regards emptying the uterus, it has been his practice in a number of cases to treat by opium, etc., and take no step to hurry the confinement. He has never had reason to regret this course.

Dr. Grant agreed with Dr. Ross that it was important to watch puerperal cases, with a view to preventing the serious complication of convulsions. He trusts, in cases with slight œdema, to a course of potash, especially the bitartrate. He is in favor of the narcotic treatment of the actual eclampsia.

Dr. Davidson objected to the use of pilocarpine on account of the pulmonary dangers. He saw one case where great lividity was produced, with marked frothy exudation in the bronchi.

Dr. Thornton spoke of the value of pilocarpine in cases of general anasarca, especially those of a chronic kind. He considers its use in puerperal cases somewhat problematical. The treatment of puerperal convulsions, he thinks, should not be uniform, but must be based upon the nature of the probable exciting cause.

Dr. McKeough, in reply, said he claimed no special value for the drug, but brought the cases before the Association as observations of some interest, and he was pleased with the discussion they had elicited. He thought his cases were all of uræmic origin, as they generally are.

Dr. Osler then read a paper on the "*Clinical and Pathological Relation of the Cæcum and Appendix.*"

Dr. Whiteman, of Shakespeare, read a paper on "*Pelvic Peritonitis and Pelvic Abscess.*"

General Meeting—Afternoon Session.

The President took the chair at 1.30 p.m. The minutes of the last general meeting were read and confirmed.

The committee named at the last annual meeting of the Association to revise the by-laws were reappointed, and requested to report progress at the Quebec meeting.

Moved by Dr. Fulton, seconded by Dr. McLarty, that the following members of the Association be appointed a committee to confer with the Dominion Government to devise the best means of preventing the introduction of cholera into the country: Dr. Canniff, Toronto; Dr. Grant, Ottawa; Dr. Sullivan, Kingston; and Drs. Hingston and Rottot, Montreal.

Votes of thanks were tendered to the profession of Chatham, to the Steamboat and Railway Companies, to the Rector and Wardens of Christ Church, and to the citizens of Chatham.

CANADA

Medical and Surgical Journal.

MONTREAL, OCTOBER, 1885.

THE EPIDEMIC.

"How great a matter a little fire kindleth!" We have already written the history of the present outbreak of smallpox, and shall not repeat it. Enough to remember that the epidemic—which is now scourging this city and killing more victims in a few months than ever before fell in a year—undoubtedly originated from a simple case of varioloid. There has never been an instance in which a widespread contagious disease has been more clearly traceable to its source. Effect has followed cause, as in this world it always will. Failing to profit by the hard lessons of previous visitations, a numerous section of our population, densely and superstitiously obstinate, blinded by prejudice, and following the guidance of a stray false prophet, have for years entirely neglected, or rather refused to accept, that safeguard which science has *proved* to be of value. During the five years of respite from smallpox which the city has happily enjoyed there have grown up a multitude of French Canadian children—unvaccinated—who were ready to cause the smallest spark of variolous poison to burst forth into a general conflagration. They formed the finest kind of fuel, dried and ready for an epidemic to feed upon. The consequences have been truly appalling. Since April last some 850 deaths from smallpox have occurred! The vast majority of these are French Canadians. It is impossible to estimate the number of cases, but they do not fall short of many hundreds. For many weeks the progress of the disease has got quite beyond any approach to control on the part of the Board of Health. But, at last, the public seem to be fully alive to the gravity of the

situation, and decided action is being taken in the right direction. Too much time has been allowed to pass in attempts at moral suasion which it was certain beforehand would only fail. Compulsory vaccination and compulsory isolation are the only means which will ever effect an abatement of this gigantic evil. The Provincial Board of Health, hastily organized, has proclaimed the necessity for enforcing these measures, and, ably assisted as the local Board will be by active and capable citizens who are devoting their whole energies to the work, it is confidently hoped some immediate good will result and the spread of the plague be arrested. Every person in the city *must* be vaccinated. Every case of smallpox *must* be reported, and every such case *must* be isolated, either in the hospital or at home, as the Sanitary authorities may direct. No half measures will suffice. Do this faithfully and thoroughly, and just as ignorance, neglect, indifference and carelessness have caused the outbreak, so the opposite of these, applied to the well-known rules governing the management of smallpox cases, will equally effect its arrest.

The International Medical Congress.—The new committee met in New York early last month and proceeded to do the best they could with the class of professional material at their disposal. The nominations of new presidents of the sections seem, in the majority of instances, most extraordinary. We are near enough to the States, and familiar enough with American literature, to know pretty well the names of the leaders in the different departments of medicine and surgery, but of the seventeen names of chairmen of sections, there are twelve absolutely unknown to us as representatives in their different departments. We ask of many, in blank astonishment, Who are they? What have they done? Where do they live? Truly the committee is sunk low when it must place such men at the head of important sections in an international gathering. The contrast between some of the past and present nominees would be simply ludicrous, were it not painful. The Association is determined to have the Congress, and the remnant of distinguished men such as Flint, N. S. Davis, and Dalton, who

have cast their fortunes with it, may do much to save it from being an absolute failure, but the leaders of the profession, and the workers who have made American medicine and surgery known here and in Europe, are not in it. The play will go on, but with Autolycus disguised as Hamlet.

—At the recent meeting of the American Laryngological Association, Dr. G. W. Major of this city was elected 2nd Vice-President. Dr. Major is expected to return from Europe early in October, when instruction at the General Hospital in his special department will be resumed.

—We regret to learn that the Halifax School of Medicine has temporarily suspended work, pending the adjustment of certain difficulties about the hospital.

—We are glad to learn that our friend Dr. Bucke, of London Asylum, who has been out of sorts for some time, has been granted four months leave of absence.

—We hear that Mr. Keith of Edinburgh recently paid a professional visit to Boston to consult with Dr. Homans. He did not operate, and only remained three days. Rumor makes the fee a fine figure.

—The following has been accidentally omitted from our report of the Canadian Medical Association meeting:—

The following papers were read by title:

"*Retroversion of the Gravid Uterus*," by Dr. W. B. Geikie, of Toronto.

"*Micro-organisms in Puerperal Septicæmia: Prophylaxis and Treatment*," by Dr. T. Johnson Alloway, of Montreal.

"*Field Hospitals and Climate in the North-West Territories*," by Dr. Nattress, of Toronto.

"*Phlegmasia Dolens*," by Dr. A. H. Wright, of Toronto.

"*Inebriety a Disease, the Result of Physical Causes*," by Dr. Stephen Lett, of Guelph.

Obituary.

W. G. Metcalfe.—Nothing could have been more sad than the untimely end of Dr. Metcalfe, the superintendent of the Rockwood Asylum, Kingston. As he was entering one of the wards a lunatic stabbed him in the abdomen, and though the bowels were not wounded, he died of shock and peritonitis after

an illness of three days. His death is a grievous loss to the asylum staff in Ontario and to the profession at large. One of Dr. Workman's ablest pupils, he had entered upon the study of lunacy in the true scientific spirit, and had, we all hoped, a brilliant career before him. He graduated at Toronto University in 1872.

H. L. Vercoe.—We should have noticed in our last issue the death of Dr. Vercoe at Toronto on the 28th of July. He had been ailing for some time past, and left Seaforth, Ont., where he had practiced for many years, and travelled south in pursuit of health. Returning last year somewhat better, he began practice in Toronto, when the symptoms of malignant disease of the bowel became manifest and ended fatally. Dr. Vercoe studied at McGill College, and was known as a most painstaking, industrious worker. He graduated in 1865, taking the prize for the best final examination. At Seaforth, where he practised, he won the esteem and confidence of the public, and among his professional brethren in that section of the country he was recognized as a widely read and able practitioner.

John R. Vicat—a graduate of McGill of 1867—died last month in South Carolina. Dr. Vicat had practised for many years in Richmond, Que., where he enjoyed a wide popularity and the respect of the whole community. He was a well-informed and able practitioner, whose genial good nature always made him a favorite. He had for some time suffered from a severe bronchial affection, for the relief of which he had sought a southern climate. His death will be learnt with sincere regret by his many friends and former classmates.

Medical Items.

The Right to a Name.—Baron Liebig gave to Liebig's Extract of Meat Company (Limited), in 1865, the exclusive use of his name upon the most distinct engagement by that Company that all their extract should be submitted to the strictest control and analysis. No sooner was the success of this Company an undeniable fact than small competitors came forward, who at once tried to offer their extracts under the name of "Liebig's Extract of Meat." Law-suits ensued, and in France the judge emphatically stated that a man's right to dispose of his name was absolute and sacred. In this country, on the contrary, it was declared that Baron Liebig had no right to give to the Company the exclusive use of his name. The consequences in France are that no rival Extract of Meat can be called

" Liebig's," and the public are protected against buying articles other than the original and genuine extract. In this country, on the other hand, many extracts are offered as " Liebig's," though utterly repudiated by Baron Liebig.—*Globe.*

—Dr. T. G. Sheats of Shady Grove, Ga., says : I have had the opportunity of trying PAPINE in a few cases. I consider it a very valuable anodyne, perfectly devoid of the disagreeable secondary effects of opium or morphine.

—The Rumford Chemical Works, Providence, R.I., manufacturers of Prof. Horsford's Acid Phosphate, have recently purchased a commodious building and warehouse near their present location, where they propose to remove their business a few months hence. This purchase has been necessitated by the demands of their large and increasing business, and it is pleasant to record such an evidence of well deserved success and prosperity.

—It is to be regretted that many mothers do not commence the use of Mellin's Food until their infants are sick. It must be borne in mind that this Food is not a medicine, and is not intended primarily for sick babies, but is an excellent artificial food for healthy as well as for sick infants. Owing to the careful way in which it is manufactured, the whole of the starch is converted into dextrine and grape-sugar, so that the greater part of the work of digestion is performed before the food reaches the child's stomach. Mixed with milk and water, the Food is, as a rule, readily digested by the youngest infant.

—Experience, the greatest of all teachers, has demonstrated that, in a large number of cases, Cod Liver Oil is beneficial for a few weeks, that the patient improves upon it, gains flesh and strength, but unfortunately this improvement does not continue ; right in the midst of flattering prospects the patient comes to a halt, ceases to gain weight, or otherwise improve. Physicians have experimented for years in their endeavor to overcome this objection ; it has finally been accomplished by Drs. G. Overend Drewry and F. C. Bartlett of London, England, who, by means of pancreatine, have succeeded in perfectly digesting or hydrating the oil, thus giving to the profession cod liver oil in a perfectly assimilable form, overcoming the only objection to its continued use. This hydrated oil is christened HYDROLEINE, and after nearly five years of extended trial it has been extensively approved of.

CANADA

MEDICAL & SURGICAL JOURNAL

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Original Communications.

CASE OF ANEURISM OF THE THORACIC AORTA.

By J. A. GRANT, M.D., F.R.C.P., Lond., Ottawa.
Consulting Physician, General and County of Carleton Hospitals, Ottawa.

(*Read before the Canadian Medical Association, Chatham, September*, 1885.)

The subject of this history was engaged in sedentary business, of spare habit of body, regular conformation, and more than average intelligence. Good family record, and never had rheumatism or syphilis. He had been under my care for fully ten years, and up to 1880 enjoyed excellent health, and always lived a temperate and regular life. In 1880 he complained of rheumatic pains in his left side, arm and shoulder, which usually subsided for a time with moderate exercise, there being no specially marked indications of constitutional disease. The apparently functional irregularities continuing, and not giving way permanently to treatment, led to the existence of an affection of the great vessels. In April, 1883, apex of heart, beats between 5th and 6th ribs, internal to and below the left nipple, somewhat feeble and diffused. A sense of heaving pulsation is felt over the upper part of the left chest, synchronous with the cardiac impulse, and possessing a moderately expansive lateral motion. On percussion, about the level of the nipple there was an undoubted increase of cardiac dulness. As time passed on, the dull thoracic space gradually increased and became more defined in character, extending from the upper boundary of the heart, in a direction towards the right sterno-clavicular articulation, and on auscultation at the heart's apex, a double blowing

murmur audible, extending from the base of the heart to the aorta, through a considerable portion of which it was traced. Posteriorly, no particular dulness could be defined, although, on auscultation, a double murmur was traced and audible over the left back, and most distinct between the vertebræ and edge of the left scapula. On auscultation over the lungs, occasional sonorous râles were observable, with a moderate degree of prolonged expiration. At times a slight cough and limited expectoration of mucus, but never tinged with blood. No appreciable difference in either pulse. Occasional slight inequality of the pupils, not, however, continuous or determined in character, but sufficiently so to suggest the existence of aortic disease from the apparently moderate implication of the sympathetic and recurrent laryngeal nerves, resulting in local irritation and iritic irregularity. Digestive, urinary and other functions tolerably good. He was recommended to take moderate exercise, to occupy his office only a few hours each day, to take light nourishing diet, and to avoid excitement and over-exertion, but to continue the free use of the iodides. By strict adherence to this plan of treatment, his general health improved for a time. The disease, however, made slow, but gradual progress, the period occupied from first to last of his illness being about four and a-half years, the symptoms varying in intensity and in proportion to the existing abnormality, and yet with a remarkable degree of accommodation to the surrounding diseased condition. Never had any dropsical state whatever. For eighteen months prior to death was subject to paroxysmal cough, associated with shortness of breath and, at times, a feeling of suffocation. Sleep usually composed. Mental excitement tended to increase the pulmonary difficulty, causing pain in the chest almost like angina pectoris. No difficulty in swallowing, and loss of flesh was not marked. Within a short period of his death, would have passed for a person in ordinary health but for the swelling on right chest, which could readily be observed through the clothing. The tumor externally was hemispherical in shape, extending from near the right clavicle to about the 6th rib, and laterally occupying the space from the right nipple to within two and a-half inches

of the left nipple. The central and deepest portion of the tumor externally would be indicated by a line drawn vertically downwards from the right sterno-clavicular articulation. Pulsation was felt distinctly over the whole tumor equally. There was no particular pain in the tumor, and the patient moved about as usual and presented no physiognomical indications of distress. The voice was natural, and, in general, the thoracic functions were performed with surprising regularity.

July 15th, '85.—Retired to rest as well as usual under the circumstances, and in a few moments afterwards suddenly arose from his bed with a sense of impending suffocation and almost immediately became unconscious, breathing heavily and with great difficulty, and, continuing in that condition until 10 a.m. the following day, expired.

Sectio cadaveris, twenty-four hours after death.—*Thorax:* After death the tumor became somewhat flaccid. In reflecting back the skin, the covering of the tumor was found to be formed by the pectoralis muscle and thickened cellular tissue, and fully several inches of the 3rd, 4th and 5th ribs, and of the right side of the sternum, were eroded, this space leading to the cavity of an aneurism, involving a considerable portion of the ascending and transverse aorta. The sac contained laminated coagula, which formed a layer more than an inch in thickness, and externally were observed loose clots of the consistence and color of ordinary currant jelly. The aorta was decidedly atheromatous, and the semilunar valves were thickened, incompetent, and semi-cartilaginous, thus accounting for the murmurs. The heart large and hypertrophied. Right chambers distended with blood. Left ventricle large; walls thicker than normal. On the right side of chest there were extensive pleuritic adhesions.

Within the past few years much attention has been directed to the occurrence of laryngeal symptoms,—such as laryngeal paralysis,—and also to inequality of the pupils, as important indications of the presence of aneurismal thoracic tumors. In the present instance, the physical signs were well defined and the tumor unusually large, and yet a very limited degree of either laryngeal complications or inequality of the pupils. In

such cases the presence of hemorrhage is considered of diagnostic importance, Dr. Gairdner of Glasgow holding that he would not consider the hemorrhagic discharges of a person affected with aneurism as indicating the communication of the sac with the mucous membrane, although it generally did so, when hæmoptysis occurred, if the aneurism pressed on the trachea, and if it were accompanied with indications of pulmonary change of structure. Dr. Gibson of London states that in one-fourth of the cases he has collected of aneurism of the descending aorta, there were present both hæmoptysis and stridulous breathing. In the present case no hæmoptysis had taken place, and the immediate cause of death pointed to cerebral embolism and paralysis. The absence of many of the important indications of thoracic pressure may be accounted for by the increased thoracic capacity, the result of costal and sternal erosion, thus affording considerable additional space for pulmonary expansion, and at the same time, not in any remarkable manner, retarding cardiac or pulmonary circulation. Throughout, the temperature was normal, thus illustrating that systemic absorption, as well as blood-making power, were not apparently defective. The cerebral functions were not in any way interrupted prior to the occurrence of the last act of vitality. The retina exhibited no indications of disturbed circulation. The jugulars were not unduly dilated, nor even excessive fulness in the supra sternal notch. Of the remarkable accommodating powers of the system, even during the existence of organic disease, we have frequent evidence in the great cavities of the body, hence the necessity of rigid examination under all circumstances.

FIELD HOSPITALS AND CLIMATE IN THE NORTH-WEST TERRITORY.

By WILLIAM NATTRESS, M.D., Toronto.

(*Read before the Canadian Medical Association, Chatham, September,* 1885.)

I am aware that the advantage of field hospitals has long been recognized, and in bringing the subject before you in connection with the climate of the North-West, I do so feeling we owe so much to those two factors for the more than ordinary success attending the wounded during the recent campaign.

In establishing a field hospital in Battleford, we found it very easy indeed, in a country so well adapted to camp life, to select a site. We pitched our *marquee* on the south bank of the Northern Saskatchewan, as well removed from the fort and little town as safety would allow,—a beautiful slope down to the swiftly-flowing river in front, a vast extent of prairie behind, with a turf dry, smooth and clean, a more perfect spot could not be desired. The season also favored us—May and June,—when spring, with all its freshness, was passing into early summer, when the cold was not felt, and the heat was not oppressive. The condition of the ground, the locality, the season, everything nature could supply was there to make our hospital a model one and enhance the comfort of the patients, who, being well supplied with cots, mattrasses and blankets, and with plenty of good dressers, hospital orderlies and cooks, had their wants regularly attended to, and their wounds kept clean and in good condition.

Before referring to any practical illustrations of the advantages of a field hospital, I wish to make a remark or two about the *climate*, and in this connection I cannot do better than give a few notes taken from observations made by B. F. Brown, Esq., B.A., of the "Red Cross Ambulance Corps," during the month of May and part of June. He gives the following

Temperature.

Average temperature at 9 a.m. during month of May, 55°F.
" " " 2 p.m. " " " 66°.
" " " 9 p.m. " " " 48½°.

During the first week in May, we had nightly from 6° to 7° of

frost. The highest temperature in May was 72°F. Towards the end of June, at 2 p.m., the thermometer rose to 80° and over, and for two or three days it reached 97°F.

Rain-fall.—We had only one regular rain-fall during May, $=\frac{1}{3}$ inch, and two thunder-storms, each only = .02 inch.

Prevailing Winds.—The prevailing winds were from the south-east—occasionally from the east; these usually veered towards the west in the evening. These winds are almost constant, and always moderately brisk—from 8 to 10 miles an hour. Storms, too, usually come from the south-east.

Clouds.—Clouds were never plentiful, an average of not more than one-third of the sky being covered during the day, and these were usually of the lighter kinds—cumulus and cumulo-stratus. At night the sky was almost invariably clear, and the auroral display during the second and third weeks of May was magnificently grand. For ten consecutive nights the whole atmosphere seemed charged with electricity, showing itself in brilliant auroral streamers shooting off from the zenith towards the horizon in almost every direction, while towards the north and west numerous bright flashes played across these with lightning rapidity.

I need only, briefly, here draw your attention to a few facts relating to the climate, as shown by the foregoing observations.

Weather almost unchangeable—three storms in a month.

Air pure, clear, dry, and always in motion.

Temperature: nights cool; days bright and warm.

The presence of so much electricity in the air developing, as no doubt it does, quantities of *ozone*, rendering it stronger and more exhilarating.

Let me say here, as one of the surgeons in charge of that hospital, I feel pleased with our results, which you will see was most satisfactory; but I am assured the pure, out-door air and the unchangeable weather of that northern country contributed much towards the recovery of our patients.

The rebellion in the North-West was so quickly and effectually quelled, that many surgeons who went out there had comparatively little work. Though more fortunate than a number of

regimental surgeons, who, with their regiments, never got far beyond the line of railway, I was less so than some others in being later on the field, and in not reaching what afterwards proved to be the most central point of the enemy's attack. I reached Battleford in charge of the "Red Cross Ambulance Corps" on the 3rd of May, and found that the wounded from Cut Knife Creek had been brought in but a few hours before. In that engagement our casualties were 23 men wounded, seven of whom died on the battlefield and one early next morning after arriving home. The remaining fifteen men, together with two or three who were accidentally shot, constituted our chief care in that hospital. It is from these I propose giving a few notes to illustrate what I have already said regarding the field hospital and climate as conducing towards the recovery of our patients.

I cannot, in a short paper, attempt to give a full classification of all the wounds, and will therefore only refer to the more serious ones, taking advantage of regimental divisions as a species of classification :—

From the Queen's Own Rifles there were six wounded—three seriously and three slightly. Those seriously wounded were :

Private L. Bullet entered left of spine, inclining upwards and outwards towards the right side, it passed between the spinous processes of the 8th and 9th dorsal vertebræ, and was extracted just below the spine of the right scapula. This operation was performed on the battlefield ; wound between 8 and 9 inches long.

Private N. Almost the same wound as the preceding, but made by bullet travelling in the opposite direction. Entering a little higher on the right shoulder, the bullet was discovered on the 20th May lying close to the right side of the spine and removed ; wound 9 inches long.

Color-Sergeant C. Ball entered near hip-joint, about an inch below the crest of the ilium, and passing downwards and inwards, made its exit two inches from the anus. Wound 8 inches long.

From "B" Battery there were four wounded—one seriously, three slightly :

Gunner R. Ball entered upper third of right arm, fracturing

neck of the humerus, and, continuing its course under the infra-scapular muscles, was, on the 9th May, discovered below the angle of the scapula, and extracted, together with a piece of the fractured humerus. This proved to be the most troublesome wound in the hospital. It gave considerable trouble until about the middle of June, when a further search revealed a piece of his tunic deeply imbedded in the wound. After the removal of this, it healed rapidly.

From the Governor-General's Foot-Guards, two wounded, both somewhat seriously. In one (Private M.). the bullet passed across the nape of the neck, close to the occipital protuberance. In the other (Color-Sergeant W.), across the face, entering at the root of the left alæ of the nose, and passing diagonally, finally emerged beneath the zygomatic process of the right malar bone. On the 14th May, a small spicula of bone was extracted from the cheek, and on the 20th May he resumed duty with his corps. On the 25th June, while halting at Birch Lake, on the Big Bear expedition, the wound was noticed to have become much inflamed and swollen, and on cutting down, I found not only a piece of dead bone, but a portion of the bullet, a little larger than a buck-shot. After removal of these, the wound healed kindly. This young and brave volunteer had come through the battles of Kassasin and Tel-el-Keber without a scratch.

From the Battleford Rifles, one wounded, not seriously.

From "C" Company, one wounded, not seriously.

From Mounted Police, one wounded, seriously.

Sergeant W. Ball entered at upper inner angle of left inguinal region. The abdominal walls being tense at the time, the bullet did not penetrate, but evidently split, as two sinuses were discovered, one leading downwards and outwards towards the crest of the ileum, the other downwards towards the pubic crest. Neither portions of the bullet were located, and hence remain in; the wound having healed perfectly. There was considerable stomachic disturbance in this patient at first, but this subsiding, the case went on satisfactorily.

Surgically, I may say, in examining those in whom the bullets

still remained, where it could be definitely located without serious interference and removal practicable, the bullet was extracted at once and a drainage-tube introduced when advisable. All wounds were dressed antiseptically. The diet could not be regulated by any fixed rules. Our patients, for some time at least, were obliged to do with but little variety.

Briefly I have given the list of the fifteen wounded from Cut Knife Creek, the nature of their wounds, and how they were treated. I am pleased to be able to say they all recovered without even an amputation. It was somewhat remarkable that all who could be brought back and placed in the hospital should recover so perfectly. Their wounds varied considerably, as a matter of course ; some were more or less serious, while others were comparatively trifling. Still, that the record should be so complete is noteworthy, and suggests the idea that something more than the skill and care displayed by the surgeons and the regular and efficient attendance of qualified dressers contributed to so happy a result. I am disposed to accredit camp-life and the climate with a large measure of the success obtained.

The tendency for wounds to heal and patients to recover in that climate, and under canvass, is, perhaps, better illustrated in the case of a settler who was accidentally shot in the elbow by one of his comrades while in the act of unloading the magazine of his Winchester rifle after returning from guard duty. This man had always lived in that country, having been born there of Scotch parents. He is 63 years of age, and had been most of his life in the employ of the Hudson Bay Company. His family history was good, and he had never abused himself in any way. True, he had on several occasions to suffer some of the privations of a northern winter, and had more than once felt the keen pangs of hunger, but at the time of the accident he was strong, healthy, and well nourished. He was wounded nearly a month before any surgeon arrived in Battleford, and perhaps did not receive proper attention at the beginning. However, the brachial artery must have been wounded at the time of the injury, for on two different occasions the patient had profuse hemorrhage, and, following closely on these, gangrene of

the forearm and hand. The only possible chance to save the man's life was in amputation. A consultation was held on the 5th May, and although he was extremely weak, it was decided to operate the following morning. Dr. Widmer Rolph, to whose charge the patient had fallen, had directed that everything be removed from the little tent which he occupied. Nothing was left but the cot and a little table, and here, on the 6th May, he amputated the arm at the junction of the upper with the middle third, and well removed from unhealthy tissue. The patient rallied quickly, and for a day or two seemed to be doing well, but soon it was observed the flaps would slough. The wound was immediately laid open, and charcoal-linseed poultices were used to facilitate removal of the slough, and afterwards carbolic-water on the syphon principle was allowed to drip constantly on the raw surfaces. The sloughing of the flaps necessitated another operation. Between one and two inches of the humerus was resected, and the flaps brought as closely in apposition as possible. Large and frequently-repeated doses of ammonia and bark were administered, and everything went on satisfactorily.

This case is particularly interesting when we remember the patient was an old man; that the accident happened about the beginning of April, and had not received much attention until the beginning of May; that the state of the country at the time gave him much concern regarding the safety of himself and family; and that the presence of gangrene and the sloughing of the flaps necessitated two operations within a month. Notwithstanding all this, the patient made a good recovery, and on the 1st July—the day I last saw him—he was moving around, feeling well, the stump all but healed. Such a result we would seldom expect, under similar circumstances, to obtain in our own climate and in a well-appointed hospital. It undoubtedly says much for the healthiness of the climate in the North-West, and is a strong indication in favor of hospital tents.

The value of a hospital-tent was probably brought more evidently to our notice by a little incident that occurred there. A sudden and violent wind-storm blew down our hospital marquee, tearing it in many places, and exposing the patients for a time

to the storm. They were removed as quickly as possible to the Mounted Police Hospital, a low wooden building, tolerably clean, but small, being barely large enough for the fifteen cots in use to allow sufficient space between. They remained there a few days until the tent could be repaired and set up again, and during this time a very marked depression was noticeable in all who were in any way severely wounded. The change to so small a building was certainly a most decided one, but the depression was just as decidedly marked. Some of them said they felt they would die if kept long in-doors. They preferred the tent, because they felt so much better, their wounds were less irritable, and the air seemed much purer and more refreshing. Immediately on returning them to the tent, a revival of spirits and a cheerfulness which is always encouraging to the surgeon showed in all—their wounds pained them less, they were more comfortable, and felt stronger.

There yet remains much to be said regarding the climate and camp-life as they affected the general health of the hundreds who were taken from the warehouse, the shop, the office, and the comforts of a luxurious home, to endure the keen blasts of winter and the boiling heat of summer, to perform long and wearisome marches, fatigues, guards and pickets, to fight for and defend the homes and privileges of their fellow-men, and to subsist on rough, coarse food for four long months. Unaccustomed as they were to such hardships and to the dull routine of a soldier's life, still the majority of these returned home more healthy and robust than when they left. We cannot but observe that not alone was there a tendency for the sick to get well, for the wounded to recover, but also a general improvement in the health, strength and endurance of the men. What more can be said of the climate of any country, or what better evidences are required to prove the efficiency of tent life ?

In conclusion, I would just like to make one or two suggestions. From what I know of that country, from my own experience of it during some of the spring and summer months, and from the evidence of two or three who have gone there for their health, I am convinced it is a grand place for those who are suffering

from lung trouble, or catarrh of the nose, throat or bronchial tubes. I cannot exactly explain why, unless it be in the fact that the air is so dry and evaporation so rapid, the catarrhal mucus becomes less profuse and the desire to cough less persistent, and, in addition, the purer air relieves respiration and gives a fresher impulse to the heart. With a tent, a good bed, and a few camping utensils, I would say to those to whom life is now a burden, a summer in that country under canvass would be of material benefit to them. The winters are said to be quite as healthy, though, of course, camping would be quite out of the question then. Further, I am so convinced of the benefits of camp-life, that I would like to see it more enouraged than at present in connection with our general hospitals. Wherever practicable, I think the grounds around our hospitals during the summer months should be utilized to their fullest extent. Society ladies, office-worn men, students, professors and others flock to some favorite lake-side camping-ground or to the fresher sea breeze during the hot season to recuperate. Why should not our hospital patients be indulged in like luxuries as far as practicable ?

SUPRAPUBIC URINATION.

By J. P. RUTHERFORD, M.D., Chatham, Ont.

(*Read before the Canadian Medical Association, Chatham, September* 2, 1885.)

Suprapubic urination, the subject which I propose summarily to deal with in the present paper, may arise from three distinct causes. 1st, Congenital deficiency of the anterior wall of the bladder, exstrophy. 2nd, From an opening caused from malignant disease, or traumatic injury. 3rd, Superinduced by the hand of the surgeon in the operation of tapping. To the last of these my thoughts will be mainly directed, not so much to show any original plan, as to compare different methods, for the purpose of bringing out a full discussion of the question.

The necessity for any such operation—I mean "bladder tapping"—in any region, simply hinges on two fundamental conditions. 1st, Complete retention. 2nd, The exhaustion of all simpler expedients for the relief of this condition. And here

is where the wedge of controversy enters. Although its necessity is admitted by all surgeons in some extreme cases, eminent men differ as to place of tapping, and just when it shall replace other methods of relieving an over-distended bladder.

Dr. Coulson extends the above rule for guidance by advising the operation of anterior tapping in all cases of "engorgement" produced by enlargement of the prostate gland, necessitating the frequent and difficult introduction of the catheter to remove residual urine, thus giving the irritable bladder and prostate perfect quietude.

In passing, briefly, allow me to notice some of the main causes of complete retention, namely, spasmodic and organic stricture of the urethra and occlusion of the same by impacted calculus, traumatic injury, enlarged prostate gland, or malignant disease. The two latter supply nearly all the cases demanding the operation in question. To relieve a patient in such distress, after thoroughly manipulating with catheters of different sizes and kinds, combined with their powerful adjuncts, opium, chloroform, hot baths, etc., the honest and anxious surgeon, in the face of failure, will ask the question, "What next?" In answer, if we can introduce a filiform bougie, perform Prof. Symes' operation called "external division"; if not, we have "external urethrotomy" at our command, called perineal section by some. External urethrotomy is cutting through the strictured portion without a guide, and said to be (by leading authorities upon this subject) a very difficult, hazardous, and sometimes unsuccessful operation. Again, we have forcing the stricture with a silver catheter, now obsolete; and many other methods only deserving a passing notice, such as cutting out the stricture, Dupuytren's vital dilatation, Wakley's sliding tubes, Arnold's fluid pressure, internal use of caustics, electrolysis, etc. Then, again, we can tap the urethra directly behind the stricture, if sacculated or distended with urine—this method was strongly advocated by Profs. Liston and Guthrie—a difficult operation, save in the condition of urethra as above, and one at present very seldom resorted to. Any successful operation on the urethral tract, when at all practicable, is the best, as the result is more likely to be

permanent ; and to save time, it is sometimes advisable to give temporary relief to the patient by immediate aspiration.

To come more closely to my text. All the foregoing methods of relief having failed or proved to be unsuitable to the case, and when we wish to establish a new outlet for some days—nay, it may be some months, or even years—what shall and must be done ? This paper answers, Tap the bladder, and do it anteriorly or supra-pubicly. I advocate this outlet as being on the list next to the natural way. *Four* different methods have been advocated, differing, not so much from their methods of performance as their points of entrance. Two of these have fallen into disuse—the one called "subpubic," first and last performed by Voillemier ; the other, called "pubic," first performed by Dr. Brander of Jersey in 1825. These methods I will not attempt to describe. The most favored positions to-day, through the rectum, hereafter called the "posterior method," and supra-pubic, called "anterior method." The posterior is also called the English method, and was very forcibly advocated and practised by Mr. Cock of Guy's Hospital. The anterior or Irish method, strongly upheld by Fleming, was first performed by Dr. Wiery in 1701, and pronounced the best by Sir H. Thompson, Keys, and many other eminent surgeons, in all cases where a permanent opening is required for any length of time.

Operation.—An assistant, long-curved trocar and canula, soft catheter, some tape, adhesive plaster, and chloroform are required. The catheter should be No. 6, and exactly fit the canula in order to allow of the escape of any mucus, muco-pus, blood or epithelial debris present. After administering chloroform or ether (if thought desirable), remove the hair from Mons Veneris, place the patient in a semi-reclining position, enter the trocar and canula through the integument one inch above the pubis, in the median line, directing its course slightly downwards. During the operation, the bladder is supported antero-laterally by the assistant. The tissues down to the bladder should be pierced by the trocar and not incised. This method was first adopted by Mercier, and is, I think, a most excellent modification of the former plan, as it fortifies very much against

extravasation of urine, the canula being better, more firmly and securely held *in situ* by the muscular contraction of the bladder wall at the one end and of the skin at the other. The trocar must be very sharp-pointed; if not, the bladder may be separated from its areolar bed before piercing. This accident would invite trouble by way of abscess from extravasation of urine. It must be replaced by the soft catheter before the bladder is emptied. The objects of the soft catheter are four-fold:

1st, To save coats of the bladder from rough edge of canula.

2nd, To allow more fully of washing out of the same.

3rd, By attaching a rubber tube, to conduct the urine to a suitable receiver.

4th, By keeping it introduced well into the cavity, it prevents the urine from escaping around the canula, and holds the latter better in position.

If faintness supervene, discontinue flow of urine and administer a stimulant. Ether hypodermically answers admirably.

Case I.—J. S.—One of malignant disease, involving prostate and neck of bladder, necessitating for some time the use of the catheter, finally ending in complete occlusion of the urethra, and baffling relief from the latter. Retention, extravasation and certain death, on the one hand, or tapping the bladder, on the other, stared the patient and friends in the face. After consulting with patient and friends, an operation (the only hope of prolonging life) was decided on, and finding no possibility of entering per rectum from the extension of the disease in that direction, the anterior method was chosen. The operation was performed as herein detailed, with his lease of life extended fully two weeks. His financial matters and domestic relations were very much improved. During this period, his hopes of a brighter future (whether mythical or not) seemed much stronger. If he was not any better off hereafter, his sons often thanked the operation for a settlement of the estate and their consequent improved standing and position to each other. At his death, urine passed freely through his novel urethral outlet, and although it is customary, after consolidation of the tissues about the canula (say four or five days), to remove both canula and catheter, in

this case, from extreme debility of the patient and atony of the bladder, the catheter was left in.

Case II.—W. C.—Was one operated on for false passage made by patient himself in attempting to procure relief and save a fee. The catheter, when in this passage, could be felt some two inches up between bladder and rectum, and could not be directed in any more favorable locality for getting urine and relieving patient. Different sizes were tried, but profuse hæmorrhage opposed a prolonged persistence in these manipulations. The only choice here lay between repeated aspirations, perineal section, and tapping. This was given in favor of tapping and the anterior operation. My reasons for such a course were—1st, I feared the urine would trickle around the canula and enter the torn region between bladder and rectum, and there set up abscess and possibly worse symptoms. 2nd, Aspiration must have been performed if I had chosen "perineal section," as it occurred just after dark, and the chances otherwise were good for a ruptured bladder before another sun brought sufficient light to properly deal with such a case. 3rd, Having thus to enter the bladder with a needle, and not being over-sanguine of getting the urethral opening from the perineum, it was considered better to use a large trocar and canula at once.

To illustrate the impunity with which the bladder may be tapped, even with a large instrument, I might cite the case of Dr. Dox, in which the bladder was punctured anteriorly some eight times in succession in as many days, to relieve a case of retention, after which the patient reacquired the power of making water per *vias naturales*. The above case you will find recorded in the *New York Medical Record* for June, 1872, by Dr. Clark of Geneva.

The operation was performed and a perfect fistula established without any bad symptoms intervening. On the fifteenth day after the operation, a catheter was with difficulty passed into the bladder and tied in, which was taken out and reintroduced twice in four days. The artificial opening completely closed up, and nothing remains to-day but a cicatrix in the hypogastric region,

the only remaining landmark of the operation The patient is quite well, and has been making water by the good old way ever since.

Case III.—J. R.—This case was one of enlarged prostate gland, coupled with vesical catarrh. The occlusion of the prostatic urethra was complete, as can be testified to by my able medical *confrère* Dr. Bray, who very kindly assisted me in trying to overcome our patient's wants by catheterization, etc. Thus failing in our efforts to relieve, we operated April 3rd, 1879, and he lived over four and a-half years, until the fall of 1883, making water during this time more naturally by the new channel than he had for years by the old, as he could retain his water better, and for three or four hours at a time, and even went about and attended to his ordinary duties. The only difficulties experienced by him were excoriation of the integument around the new orifice from contact of urine and branch fistulous tracts running from main channel,—the former always readily relieved by a closer attention to cleanliness, combined with the use of oakum and carbolized sponges over the excoriated parts; the latter by introducing and keeping in a catheter for a short time, which could be done the very day he died, showing that the urethra was almost perfect, and that he passed over to the majority in the end, from general decay and old age (having turned 78 years), and not from any difficulty in urinating. Not one drop of urine, mucus, pus or blood ever escaped from the passage which he outlived, and all attempts to catheterize the same proved futile. This only goes to prove the perfect occlusion of the urethra.

I give a summary of reasons why the anterior operation seems to me preferable to the posterior:

1st, According to some of the very best authorities—Sir H. Thompson, Keys, Coulson, etc.—the posterior method should only be used when wanted for a short time. Hence I claim aspiration should be performed instead; and when an opening for any length of time is required, tap, and do it anteriorly.

2nd, As we do not always know how long we may want this

substitutionary process, and the dangers are about equal (or if anything in favor of the anterior method), perform that which you can use long or short, and close at will.

3rd, More easily performed ; region more accessible to the surgeon.

4th, The most common cause, enlarged prostate, excludes the posterior.

5th, Dangers greater in posterior: if seminal vesicle should be wounded, epididymitis and abscess may be the result ; as to wounding peritoneum, about equally divided ; *nil*, with ordinary precautions, in either case ; extravasation of urine, abscess and blood-poisoning less in anterior if the soft catheter be used and no incision made.

6th, The function of the rectum—defœcation—not interfered with.

7th, The function of the bladder—its retaining power is present in the one case and not in the other, as was forcibly illustrated in Case III, who could hold his water for three or four hours, much longer than before the operation, and by getting up, completely empty the bladder by making the opening the most depending point. Now, in order to do this by the posterior method, the patient must occupy a position on his face and only be on his back to urinate, which is a gross violation of man's natural attitude when reclining, and of the laws of his nature.

In conclusion, an apology is due you and only justice to myself for this incoherent paper. Hoping that by tapping early the bladder in well selected cases which have baffled all other simpler methods (and such cases will occasionally occur in every man's practice), we will save our patient, in some cases, from diseased and disorganized kidneys, and in others, from certain death, I here conclude, and leave the subject open for discussion.

TREPHINING OF THE MASTOID—HISTORY OF A CASE.

By J. CAMPBELL, M.D.C.M. (McGill Univ.), L.R.C.P. (Edin.), Seaforth, Ont.

(*Read before the Canada Medical Association, at Chatham, Sept'r 3rd*, 1885.)

H. J., æt. 6½ years, a native of Canada, when six months old, had an abscess in the middle ear, which burst and discharged internally. This was repeated every three or four months for three years. In January, 1882, the mother noticed a swelling behind the ear ; this was accompanied by pain, fever, twitching, and some delirium. At this time I was absent in Europe, and the boy was attended to by the medical man in charge of my practice, who ordered a poultice and put drops in the ear to relieve the pain. From this time there was not much trouble, only a constant discharge from the ear until the summer of 1883, when swelling behind the ear came on, accompanied with tenderness, heat, fever, delirium and twitching. We made a free incision, when a copious discharge of thin sanious pus took place. The discharge continued for six months. He now felt a good deal better. We put him upon syr. fer. iodid., soft boiled and raw eggs, and sweet cream, with exercise in the fresh air. His mother thought she could not get him to take cod liver oil. At this stage we advised an operation to prevent a return of the dangerous attacks, and the 4th of October, 1883, was appointed as the day on which the operation should be performed, and Dr. Gunn of Brucefield and myself called at the house for that purpose, but the boy had improved so much in health that the parents requested us to postpone the trephining for the present, which we consented to do. He was free from any serious attacks for four or five months. From this time we treated the ear with powdered boracic acid, blowing it freely into the meatus, as recommended in such cases. He had several mild attacks from this time until the end of 1884, when he had the severest attack of all. This time the temperature ran up to 104°, and the pulse to 140, with twitching, jumping, sleeplessness, and well-marked delirium. This continued for five days, when it burst and ran freely again. The treatment was the same as before. We now

insisted upon the operation as the only means of saving his life, but as the ear was discharging freely, and the mother was near her confinement, at her urgent request we again consented to a postponement. The discharge continued for nine weeks, the ear being syringed two or three times a day during all that time with carbolized lotion 1 to 40. On the 19th of February, 1885, with the assistance of Dr. Elliot of Brucefield and my student, Mr. Donald (who gave the ether), we trephined the mastoid, using a gouge in the operation. We made the linear incision at the line of attachment of the auricle, dissected back the tissue down to the bone, and opened the mastoid directly beneath the first incision. We guarded the gouge by the carbolized fore-finger (which we used as a stop), and worked the instrument with a rotatory motion. We made the opening on a level with the upper wall of the meatus, and extending from above downwards, forming a groove opening freely with the mastoid cells. We broke down a large number of them, which is absolutely necessary, as the communication between them is so slight. We think the gouge will enable us to do this with the greatest ease and precision, and with the least possible danger.

We found that the bone broke down easily, and unhealthy pus was discharged. We dusted the opening in the bone as well as that in the flesh freely with iodoform, put in a lead tube, which we kept in place by an antiseptic bandage, and left it undisturbed for three days. We then dressed it, and syringed both through the ear and the tube with a warm 1 to 40 lotion of carbolic acid, the lotion passing freely from the ear through the tube, and *vice versâ*. No bad symptoms came on. As it healed from the bottom, we shortened the tube by splitting it up. The tube was in five weeks and a half, when it was forced out by the granulations pressing from below. It was now taken out altogether and the syringing continued through the opening. He has improved in health and strength ever since the operation, and is at present lively and active, and gaining rapidly in weight. Latterly the lotion has been discontinued, and the mother has been blowing fine boracic powder into the ear, and the discharge has entirely dried up. Examined the ear a few days ago with ear speculum and reflector, and found that the drum membrane

had healed entirely, and that he could hear the tick of my watch six inches distant. His health at the same time is excellent.

REMARKS.

The periodic occurrence of the dangerous symptoms in this case was due to the insufficient opening between the middle ear and the mastoid cells.

The condition calling for the operation is pus in the mastoid cells, and the symptoms indicating this condition are meagre and variable, the most marked being tenderness on percussion, pain, increased by the recumbent position, œdema over the mastoid on deep pressure, fever, chills, twitching and delirium, disease of the external plate of bone, and chronic discharge from the meatus. Swelling of the optic disc is also said to be an indication for the operation.

The external plate of bone may be perfectly healthy, and yet there may be pus in the cells. Sclerosis of the mastoid gives rise to symptoms similar to pus in the mastoid, which is also relieved by the operation.

There are two operations recommended: 1st, That from without, which we performed in this case. 2nd, Through the posterior wall of the meatus, known as Sexton's operation. We recommend the former, for reasons already given.

Instruments for operating on the bone.—A drill; a hammer and chisel; a gouge. The drill should be provided with a stop to determine the precise depth of perforation. The hammer and chisel are very unsafe, and should not be used. The gouge, guarded by the finger as a stop, and worked as we have described, is the best and safest instrument that can be used.

Dangers.—The chief danger is that of opening into the lateral sinus, as it curves over the inner surface of the mastoid. The position of the sinus varies as it curves forwards, thus increasing the danger in some cases, shewing the importance of making the opening as far forward as possible. Another danger is in opening into the middle fossa by operating too high. We would again advise the surgeon not to delay too long, as there is death in delay, while no operation is more successful if performed carefully and at the right time.

QUARTERLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By WILLIAM GARDNER, M.D.,
Professor of Gynæcology, McGill University; Gynæcologist to the Montreal General Hospital.

Removal of Ovarian Tumor, leaving a part of the Ovary.—At a meeting of the Berlin Obstetrical and Gynæcological Society, held on July 11th, 1885, Prof. Schröder read a paper detailing the notes of six cases of ovarian disease in which he had adopted the plan of removing the tumor and, when practicable, preserving to the patient a part of the ovary. In the first case, the patient, being told that it might be necessary to remove both ovaries, begged so piteously that one of the organs should be allowed to remain, that Schröder consented to do so if at all possible. On opening the belly there was found a tumor with long pedicle, which was ligatured and the tumor removed. The other ovary was three times as large as normal, and contained several small cysts. These were punctured, one giving forth dermoid contents, a tuft of hair being attached to its interior. This cyst was excised by a wedge-shaped incision and the surfaces united by twelve fine sutures, which arrested all bleeding. The patient made a good recovery and menstruated normally afterwards. In the second case, a left side ovarian tumor was removed with the whole organ. A small cyst was removed from the right ovary in the same way as in the first case. Recovery, with subsequent menstruation. The treatment of the other cases was similar. In his concluding remarks, the author alluded to a case of A. Martin's, in which a large ovarian cystoma was removed from one side, and a small cyst of the other ovary punctured, but no sutures inserted. The patient recovered, and conceived twice afterwards. The practice here recorded seems worthy of imitation. Doubtless many of the small cystic second ovaries we see removed at ovariotomies are not necessarily bound, if let alone, to become tumors requiring removal. These small cysts do not destroy the function of the ovary.—(*Zeitschrift f. Geb. and Gyn.*, Bd. XI, Hft. 2.)

The Question of Shock as a cause of Death or alarming symptoms after the removal of Abdominal Tumors.—Hofmeier of Berlin read a paper on this subject before the same Society on the 24th of October last (1884). He contended that the great majority of sudden deaths after such operations, if carefully investigated, will be found to be due to some previously existing disease of heart, blood-vessels or lungs. The dangers which threaten women with large abdominal tumors are varied in their nature, but they especially belong to the vascular and respiratory systems. A form of marasmus is developed, especially in ovarian tumors, leading to the so-called *facies ovariana*. Certain organs undergo degeneration, the heart being most prone to suffer. In myoma, the large veins are subject to the formation of thrombi, which easily become detached, and may cause sudden death by pulmonary embolism. Two such cases of sudden death have been reported by Schwarz from Olshausen's clinic. In one of them the patient died 24 hours after an exploratory incision. In the other—removal of the appendages for large myoma—sudden death occurred on the tenth day after a change of the dressings. In both of these cases, numerous emboli were found in both lungs and many thrombosed vessels in the pelvis and tumor. Hofmeier, in the same paper, reports nine sudden deaths of tumor cases occurring in the practice of Schröder and others, in which the heart-muscle was found in a condition of fatty or brown atrophy. But such degeneration of the heart-muscle is not confined to pathological conditions such those engendered by tumors. In the physiological condition of pregnancy they have also been developed, and the author reports a number of similar sudden deaths in women recently delivered. In these the deaths were so sudden that no thought of septic processes as a cause could be entertained, but at the autopsy the heart-muscle was found in a condition of fatty or brown atrophy.—(*Zeitsch. f. Geb. and Gyn.*, Bd. XI, Hft. 2.)

The Question of Conception after Curetting of the Endometrium.—It has been asserted by B. Schultze that, after curetting of the uterus, women, although still of an age at which child-bearing may reasonably be considered possible, are, as a

rule, rendered sterile. Duvelius has reported to the Berlin Obstetrical and Gynæcological Society a series of sixty cases from Martin's clinic, in which, after this operation, pregnancy had followed, thus disproving Schultze's assertion. Benicke, in a paper read before the same Society on the 23rd January of the present year, reported nine cases of pregnancy, some ending in abortion, but the majority proceeding to full term, which had followed the use of the curette. These cases finally dispose of this question. The truth of the matter is this, that when a woman remains sterile after such an operation, it is because her disease renders her so, and the sterility persists in spite of the treatment which in many others is the very means of rendering subsequent conceptions possible.—(*Zeitsch. f. Geb. and Gyn.*, Bd. XI, Hft. 2.)

On the Local and Constitutional Treatment of Uterine Disease.—Our readers will remember that a year ago, in these reports, I gave a resumé of one of Dr. Clifford Allbutt's Gulstonian Lectures. It will not be forgotten that Dr. Allbutt, in these lectures, while advocating the principle of the constitutional origin of many local disorders, and as a necessary corollary the constitutional treatment of such affections, took occasion to display his unrivalled mastery of English in a severely caustic attack on gynæcologists, accusing certain of them of continuing local treatment for so long a time as to injure the patient by directing her attention too much to the pelvic system when judicious constitutional tonic regimen would much more speedily and certainly cure. Dr. Routh of London read a paper before the Medical Society in defence of his obstetrical brethren.

At the last meeting of the British Medical Association, held at Cardiff in August last, Prof. Playfair read a paper "On the Proper Sphere of Constitutional and Topical Treatment in certain forms of Uterine Disease," in which, while he defends his brethren and denies the justice of the attack, so far as concerns the great majority, admits, nevertheless, that a certain number have been guilty of unduly magnifying the importance of local treatment. Such a defence came with very good grace from Dr. Playfair, who is well known to have paid much attention

to the treatment of the neurasthenic and neurotic complaints of the sufferers from uterine disease. Dr. Clifford Allbutt also read a paper "On Local and Constitutional Treatment in Uterine Diseases," in which he reiterates what he said in his lectures, but says, in plain words, that he meant the strictures to apply to only a few of those who practise gynæcology—in fact, makes the *amende honorable*. Some of his remarks are so telling and apposite that I must quote them in full. "But between these extremes of scrupulous and lax treatment there lie many and interesting problems which, had I the time to discuss, I am unable to decide. Among the chief of these is the strange influence of the mind upon the pelvic organs and the reverse. Let me tell the following story in place of an argument: A lady was under the care of a Yorkshire medical man for pelvic pain, utter inability to walk or to bear the jolting of a carriage, for some general nervous symptoms also, and, in particular, for a strangely intermittent melancholy. Her medical attendant found a large congested retroverted uterus. With much patience and mechanical skill he restored the organ from time to time, and from time to time it relapsed. She would exclaim, the moment the uterus was replaced and supported, how instant was the relief to her pains, to her gait, and, above all, to her nervous and mental discomforts. I saw her with my friend, and I, at least, shall not be accused of error in that direction when I verified the diagnosis and helped to perfect the same line of treatment. At last the husband, being weary of the relapses, took his wife to an eminent gynæcologist, to whose house she was unable to walk. The latter gentleman removed all pessaries, declared to her that she ailed nothing but the vapours, and, in fine, gained so strong an ascendancy over her, that she walked from his house, travelled home, and set about the duties and pleasures of an active life. This is now quite two years ago, and she has enjoyed perfect health ever since, though still childless. What her womb is now like, I know not, for we barely escaped much reviling in the matter. I would ask Dr. Playfair and Dr. Routh carefully to consider this complex problem of mind and pelvis, and to weigh well how much of the sudden

relief given by uterine medication is due to imposition upon the mind of the patient."

In the same section of the British Medical Association, at the same meeting, Dr. T. More Madden of Dublin read a paper "On the Correlation of Constitutional and Local Treatment in Gynæcological Practice." Dr. More Madden's paper was a very long one. He did not content himself with laying down principles, but entered into the details of treatment. While admitting the value of operative procedures, such as trachelorrhaphy and oöphorectomy, he asserted his belief that they were performed much too frequently. He dwelt upon the great influence which, he believed, syphilis, struma, gout, and rheumatism exerted in the production or perpetuation of chronic uterine affections, and the indications they presented for constitutional treatment. The great frequency and variety of distant reflex or other neurotic disturbances, pains, aches and discomforts of uterine disease were fully dwelt upon. In chronic congestive hypertrophy of the uterus, when not of scrofulous nature, Dr. More Madden has great faith in 1-24 grain doses of perchloride of mercury in tincture or infusion of bark. Tonics, as iodine, iron, arsenic, quinine, are constantly necessary. He expressed very great confidence in the value of iodated and bromated mineral waters and of chalybeate waters taken at their sources, accompanied as they are with the many advantages of healthful stimulation of mind that result from the conditions attendant on a stay at a German or French watering-place. The iodated waters recommended by Dr. Madden are those of Wildegg, Kreuznach and Salzhausen; the chalybeate waters are Spa, Ems and Schwalbach; the saline chalybeate are the Stahlbrunnen of Homburg, Franzensbad, and (in England) Tunbridge Wells and Cheltenham. The sulphurous waters he has found useful are the warm springs of Schinznach, Aix le Bains, Eaux-Bonnes and Amelie-les-Bains. In the treatment of uterine fibro-myomata, while appreciating fully the value of operative procedures, he expressed great confidence in the value of certain drugs in the treatment of these tumors. For hæmorrhage, rest, sulphuric acid, hazeline, liquor ergotæ, gallic acid, and opium. He expressed special con-

fidence in ergotine given hypodermically, and believes that by it he can control any hæmorrhage from these tumors. As stimulants to absorption or diminution of these tumors, he advocates iodine, potassium iodide, and chloride of calcium, and believes he has had ample proof of their value in attaining this object.

This discussion thus undertaken by the British Medical Association, and which I have attempted to outline, was certainly well-timed, and cannot fail to direct attention to the medical and constitutional treatment generally of the diseases of women. We are apt to forget how much good can be done in such affections by a treatment other than surgical, indispensable as is this latter in many cases.—(*Brit. Med. Journal*, Sept. 26, '85.)

A Series of One Hundred and Twelve consecutive operations for Ovarian and Parovarian Cystoma without a Death.—This is the title of a paper by Mr. Lawson Tait in the *Philadelphia Medical News* for September 12, 1885. Mr. Tait's main object in bringing forward this series of cases is, he says, to dispose, "finally and forever," so far as he is concerned, of Listerism in abdominal surgery. Mr. Tait has thoroughly tried the so-called antiseptic system and given it up, because he found his patients were being poisoned by carbolic acid, thymol, and other chemicals. With just pride Mr. Tait says: "So far as I know the present series has never been approached in success, and as I have steadily reduced my mortality since I gave up the clamp, from 8 per cent. to 6, 5 and 3 per cent., till I have, as I may almost say, brought it to a vanishing point, I think my conclusions in previous papers are completely established. These conclusions were, in the main, that the great elements of my growing success were increased personal experience, increased attention to all the minute details which go to create success, and inattention to any one of which may defeat the best laid plans. In addition to these, I may add unscrupulous cleanliness and an undeviating enforcement of discipline both on the part of the patients and my staff of assistants." The series is as follows:—Dermoid cyst, 1; cystic sarcoma, 1; abscess of ovary, 2; Cystoma of one ovary, 49; cystoma of both ovaries, 38; Parovarian cysts, 21. As all these cases recovered, it appears that, con-

trary to Sir Spencer Wells' experience of removal of both ovaries, in Mr. Tait's experience, the danger is not greater than when one only is removed. When there is a tendency to ooze, and when the patient is aged, he always uses a drainage-tube. He attributes his success largely to this and the Staffordshire knot which he used in all but two cases. In these two cases he used a number of pressure forceps to secure the pedicle, their handles protruding through the wound for some forty hours, when they were removed cautiously one by one. To arrest bleeding from adhesions, he packs with sponges for a time, and uses the cautery. In ten cases the tumors were rotated and gangrenous, requiring immediate operation to save life.

The Cure of Extra-Uterine Fœtation by Electricity, by H. G. Landis, A.M., M.D., Professor of Obstetrics and Diseases of Women in Starling Medical College. On this side of the Atlantic, at least, the efficacy of electricity in early extra-uterine fœtation is established beyond a doubt. That this is not generally admitted in Britain may be inferred from the fact that in the System of Obstetric Medicine and Surgery by Drs. Robert and Fancourt Barnes the subject is dismissed with a mere mention, and no word whatever of commendation. Other methods much more dangerous to the mother are discussed and recommended. The simple, easily manageable faradic current is all sufficient. With a view of settling the points as to the strength of the current and length of time of application, Dr. Landis undertook some experiments on beetles, minnows and rabbits, and as a result he thinks himself warranted in deducing the following conclusions :—

1. In using the faradic current in extra-uterine pregnancy, the applications should be protracted for an hour if the patient can bear it.

2. The current should be repeatedly applied, in order that the vitality of the fœtus might be finally exhausted.

3. The current should, for at least one sitting, be used in great strength.

4. The current probably acts not only by destroying the fœtus, but by its action upon the placental circulation, an additional reason for a long application.

An examination of the records of the published successful cases (I know of none unsuccessful) does not, I think, bear out the first of Dr. Landis' conclusions. I will, in proof, only allude to my own case published in this JOURNAL a few months ago. In this case, none of the half dozen applications was of more than seven minutes' duration.—(*Amer. Jour. Med. Sciences*, October, 1885.)

The American Gynæcological Society held its tenth annual meeting in Washington on September 22nd, 23rd and 24th, '85. Some of the papers are of great interest. One of especial interest is by Dr. Henry J. Garrigues of New York. The subject is "Puerperal Diphtheria." It was based on 26 cases treated by him in the New York Maternity Hospital and one elsewhere during the years 1882-1884. The diphtheritic infiltration appears in small light gray spots, which spread and coalesce to form thick patches intimately connected with the subjacent tissues. The spots of election were the vaginal and cervical orifices, spots most bruised or wounded during labor. The surrounding tissues were swollen, dark red, brown or dirty greenish, the connective tissue of the pelvis infiltrated with turbid serum, and sometimes the seat of hemorrhagic thrombosis. Erysipelas, petechiæ, and erythema were sometimes found on the skin of the trunk and extremities. The uterus enlarged, cervix bruised, torn, and covered with patches of diphtheritic membrane. Sometimes the membrane was found only in the cavity of the body of the uterus. Infiltration of the ovaries and lymphatics and glands of the pelvis; peritonitis, inflammation of liver, spleen, kidneys, lungs and pleura, catarrh of the bladder, and ulceration of intestine—all occasionally present. Dr. G. believes that every form of difficult, tedious and instrumental labor predisposes strongly to this disease, but the real cause is infection from without. The poison seemed to be in the air of the wards, for after disinfection by fumigation the disease was absent for a week, and after the introduction of the new prophylactic treatment it had entirely disappeared. The symptoms were chills, fever, frequent weak pulse, anorexia, vomiting, diarrhœa, coated tongue, hypogastric pain, scanty, dirty-looking, offensive lochia. General

symptoms preceded the local changes several days. The diphtheritic infiltration extended usually for a few days in spite of treatment, and then the parts took a week to heal after separation of the sloughs. The author had found in one case that the same affection appeared simultaneously on the tongue, and he therefore regarded it as the same as diphtheria occurring in non-puerperal wounds and intact mucous membranes, as the throat. Nervous symptoms are headache, stupidity and delirium. Jaundice, sweet breath, profuse perspiration, bedsores and soreness of spleen also occurred. When the diphtheritic process had stopped, recovery was rapid. In the diagnosis, it is important to remember that the diphtheritic infiltration must be distinguished from the yellow color which abraded surfaces take on under the bichloride of mercury bandage. This latter is strictly limited to the surface of the wounds, while the diphtheritic infiltration, where it formed a continuous layer, commenced in discrete spots, formed a thick membrane, and spread into the surrounding tissue. Prognosis is grave. Five out of Dr. G.'s twenty-nine patients died.

Prophylaxis consists in making as few vaginal examinations as possible during labor, avoiding wounds of the genital tract, careful use of instruments, but especially, in the use of antisepsis, by the bichloride of mercury and an occlusion bandage so arranged that no air can enter the genitals without being filtered through a cotton pad wrung out of a one to two thousand bichloride solution. The curative treatment consisted in thorough cauterization of all affected parts in view, with a solution of equal parts of chloride of zinc and distilled water, washing out the uterus with a 1–4000 bichloride solution, and leaving in the cavity a suppository containing 100 grs. of iodoform. This was repeated once in 24 hours, and a vaginal douche of the same solution was given every three hours. General treatment was by ergot, quinine, morphia, alcohol and digitalis. High temperature was combated by sponge baths, cold pack, cold baths, ice bags, and rubber coil with running ice water. Carbolic acid in one-minim doses was useful in allaying fever and controlling diarrhœa. Peritonitis was treated by opium, ice-bags or warm

poultices, if patient had diarrhœa. Dr. Garrigues concluded by showing his occlusion bandage.

A most interesting discussion followed. Dr. Lusk of New York indorsed Dr. Garrigues' system of treatment by antiseptic vaginal injections and antiseptic pad. These cases had occurred in considerable numbers at the Maternity Hospital previous to this plan of treatment having been introduced, but since then, in three years, he had not seen a single fatal case, not a single case of fever, and milk fever had become a thing of the past. The pad he regarded as useful, not only in preventing entrance of germs, but it enabled them to keep the wards clean.

Dr. W. L. Richardson of Boston said that in the lying-in hospital with which he is connected, nearly the whole time during the years of 1882-83 was spent in fighting puerperal diphtheria ; but after adopting Dr. Garrigues antiseptic pad and the corrosive sublimate injections, the institution had been almost absolutely free from the disease. He had, however, occasionally seen salivation follow even very weak sublimate solutions.

Dr. Garrigues, in closing the discussion, said that the total mortality of the Maternity Hospital had been reduced from seven to less than three-quarters of one per cent. The new treatment differed from the old in that all antiseptics were placed outside of the woman in *normal* cases ; it was only in *abnormal* cases that resort was had to intra-uterine injections. The pad can be readily used where serrefines are used to keep lacerated surfaces together, and being composed largely of absorbent cotton, it offers no impediment to free discharge of lochia ; and by it the usual odor of the lying-in room is entirely removed. —(*Amer. Jour. Obstet.*, Oct., 1885.)

Reviews and Notices of Books.

The Anatomy of the Intestinal Canal and Peritoneum in Man.—By Frederick Treves, F.R.C.S. Hunterian Lectures, 1885. London: H. K. Lewis.

This book is composed of the Hunterian Lectures delivered by Mr. Treves at the Royal College of Surgeons, England, last February. A systematic examination of 100 fresh bodies in the post-mortem room of the London Hospital furnished the material for these lectures. In addition to the investigations made on human bodies, the viscera of over forty different species of mammals were examined by Mr. Treves. The average length of the small intestines was found to be 22 feet 6 inches; extremes, 31 feet 10 inches and 15 feet 6 inches. The average length of the large intestine was 4 feet 6 inches; and extremes, 6 feet 6 inches and 3 feet 3 inches. The length of the intestines seems to be altogether independent (in the adult) of age, height and weight. Now, the length of the bowel in the fœtus at full term is remarkably uniform, so Mr. Treves rightly infers that the differences in the length of bowel in different individuals depends upon physiological (as food, activity of nerve centres, etc.) and not on morphological data. The duodenum was found very constant; Mr. Treves agrees with Dr. Bruce Young in describing a fourth portion, ascending vertically by the left side of the spine. He has never found this portion less than one inch in length. The position and connections of the fossa duodeno-jejunalis, which is important surgically as being the seat of origin of retroperitoneal or mesenteric hernia, are fully described, as is also its mode of development. The mesentery and the part it plays in hernia is next considered, and the holes in the mesentery, which have not unfrequently been the cause of fatal strangulation, described. The author then devotes a section to the arrangement of the small intestines; in five instances the coils of intestines were found arranged in a manner exactly the reverse to normal, without any transposition of the other viscera. The cæcum is accurately described, and its different types, variations and relations dwelt on. Mr. Treves establishes beyond

doubt the fact that the posterior surface of the cæcum is never uncovered by the peritoneum, and that the meso-cæcum has no existence. In all works on anatomy the meso-cæcum is described, and it is also stated that the posterior part of the cæcum is frequently destitute of peritoneum, and is attached by areolar tissue to the fascia over the right iliacus muscle. This error, which has been handed down by anatomists from generation to generation, must now be corrected. The relation of the cæcum to the peritoneum is of importance, both surgically and medically, and, as the author remarks, the attempt to reach the posterior part of the gut by an incision from the loin without wounding the peritoneum is anatomically impossible. In the majority of cases, the reflection of peritoneum to the posterior abdominal parietes is four inches from the tip of the cæcum—that is, the bowel for four inches is completely surrounded by peritoneum. The appendix vermiformis was found to have an average length of four inches; extremes, six inches and one inch. The appendix was, in only a few cases, found straight. In nearly all the cases examined, it was curled up, the amount of twist depending on the length of its mesentery. The ileo-cæcal fossæ and their formations are described. In two cases the author found that the cæcum was undescended and was placed under the liver to the right of the gall-bladder; and in two others, there was no peritoneal connection between the cæcum and ascending colon and the posterior wall of the abdomen. Had right lumbar colotomy been attempted in any one of these four cases, the ascending colon would not have been found.

Text-books on anatomy assert that a meso-colon is more often found on the right than the left side, but Mr. Treves found that in 52 bodies there was neither an ascending or descending meso-colon; in 22 there was a descending meso-colon, but no trace of a corresponding fold on opposite side. In 14 cases there was a meso-colon in connection with both ascending and descending colon, while in 12 bodies there was an ascending meso-colon, but no descending one. In the cases where a meso-colon existed, it was from one to two inches broad on the right side, and on the left from one to three inches. When the meso-colon was

absent, the colon was found adherent to the parietes on the outer border of kidney on left side, and in front of and along its inner border on the right.

The author found the book descriptions of the sigmoid flexure and first part of the rectum, as far as his investigations on 100 bodies went, incorrect. The sigmoid flexure he found not to have the S shape, but to consist of a single loop, which begins where the descending colon ends and ends where the second portion of rectum begins—that is, opposite the third piece of the sacrum. He suggests the name *omega loop*, in place of sigmoid flexure, and thinks the term rectum ought to be limited to the parts now known as the second and third portions. This we consider a good suggestion, and one which will make the anatomy of that part more exact and simpler. The flexure, according to the author, is more often within the pelvis than without, and is only found in the iliac fossa when the bladder or uterus are distended or a large cæcum occupies the pelvis. It is a very difficult matter to determine the exact position of these movable portions in the living by observations on the dead. We should imagine that a more certain way of determining the exact position would be by means of frozen sections. In most of the frozen sections of the pelvis we have seen, the bowel within the pelvis, exclusive of the rectum, has been a portion of the ileum and not the sigmoid flexure.

In conclusion, we may say that we have perused this work with both pleasure and profit, and wish to congratulate Mr. Treves on the valuable addition he has made to our knowledge of the anatomy of the intestinal canal. Now that abdominal surgery has become so important a department of general surgery, it is an especially opportune time for drawing attention to the many errors which have been handed down from anatomist to anatomist for generations. We trust that the many corrections made by Mr. Treves will be corroborated, and that the future text-books on anatomy will be purged of their intestinal errors. The book is got up in the latest old-fashioned style, with vellum cover, hand-made paper, with irregular uncut edges. It looks handsome, but seems to us hardly the most useful shape in which

to clothe a scientific treatise. However, we must submit to the inevitable, and bear for a time with this æsthetic invasion of scientific realms. The illustrations, which are grouped together at the end of the volume (as in the old treatises), are coarse, and certainly have an ancient look, which corresponds to the general style of the book, but they are understandable.

The Technology of Bacteria Investigation.—By Charles S. Dolley, M.D. Boston : S. E. Cassino & Co.

The Use of the Microscope in Clinical and Pathological Examinations.—By Dr. Carl Friedlander. Translated by H. C. Coe, M.D., M.R.C.S., Eng., L.R.C.P., Lond. New York : D. Appleton & Co.

Nowadays the microscope is doing so much towards advancing our knowledge of so many of the most important diseases afflicting man, that it becomes actually necessary for every physician who has the slightest pretence to a truly scientific knowledge of disease to be able to use the microscope in connection with it. To such a one, as well as to all advanced medical students, both these books will be very useful, the latter one especially so. It is only within the last very few years that the germ theory of disease occupied the practical attention of more than a very limited number of scientific medical men and others. Much was written by men who were unable to demonstrate them, or, indeed, who had ever seen them. Bacteriology had not yet assumed the importance of being capable of monopolizing the attention of scientists. *Nous avons changé tout cela.* The scientific physician of former years can still be the same of to-day so long as he practises the healing art in a scientific manner, but he is completely debarred from discussing with advantage to himself the pathology of many diseases unless he has practical knowledge of what germs are and how they may be demonstrated microscopically. It was mostly men of mature years who devoted themselves to this kind of work. The subject has now become so enticing, that no young man of any scientific aspirations can consider he knows his profession without having devoted some

time to this special kind of work. The influence of these men, who generally become enthusiasts on their subject, will be so great that the time cannot be far distant when *bacteriology* will constitute a special course in every advanced school of medicine. In the table of contents of Dr. Dolley's work is an instructive list of diseases in which specific bacteria have been discovered, or supposed to be present. This, we think, will surprise many who have not been keeping themselves abreast of the literature of the subject. Although we advise every medical man, especially every young man, to endeavor to become a microscopist, we cannot conscientiously advise them all to become bacteriologists. Were they to endeavor to do so, we fear there would not be much time left for other work of any kind. Those, however, who feel inclined to do so, will find Dr. Dolley's book a very useful synopsis of the various methods of procedure. He will also find references which will prove invaluable in prolonged researches on all the more important diseases in which bacteria are supposed to be present. In this respect, the volume is a very useful addition to our literature. It professes to be simply a work on *technology*. Besides giving special methods for investigation of pathogenic bacteria, a large portion of the book is devoted to general practical work, in which are many useful hints. Every one doing pathological work should have this little book in his possession.

We are very much pleased to see Dr. Friedlander's little book make its appearance in English dress. As we have a practical acquaintance of the German edition since its appearance, we can speak of it in terms of unqualified praise. It will be a much more useful book to the general practitioner than the first-named work. Besides ordinary clinical work, it contains all that is essential concerning bacteria for the busy practitioner to have practical knowledge of. Every medical man should possess and know how to use a microscope. To him, as well as to all advanced medical students, this book will be eminently useful. About one-half of it is taken up with what applies more properly to general *technique:* the remainder being devoted to methods of examination of blood, sputa, pus, urine, secretions, exudations,

contents of stomach and intestine, and micro-organisms; also, the examinations of tumors, etc. Accompanying the plate in the German edition is an "explanation," which certainly makes it more intelligible, and which is absent in the translation. For instance, to the uninitiated, "Fig. VIII, Pneumonia," might be somewhat puzzling until he was informed, as in the "explanation," that it is the capsuled micrococci of pneumonia. This is the more necessary, as it is not every microscopist who can satisfy himself that he can see these micrococci, or "diplococci," as they are sometimes called. The translator has done his work well, and has certainly conferred a great favor on all microscopists by placing within the reach of every one the work of so accomplished a teacher as Dr. Carl Friedlander.

Poisons: their Effects and Detection. A Manual for the use of Analytical Chemists and Experts.—By A. W. Blyth, M.R.C.S., F.C.S., &c., Public Analyst for the County of Devon, and Medical Officer of Health and Public Analyst for St. Marylebone. With tables and illustrations. Vols. I and II. New York: Wm. Wood & Co.

These volumes form part of "Wood's Series of Standard Authors" for the year 1885. The work altogether is of a very high order, and although primarily intended for public analysts and experts, the general practitioner will find much here that will be of great value to him, the symptoms and treatment of the different forms of poisoning being dealt with in a very complete manner. The description of the mode of action of the mydriatic group of alkaloids—atropine, hyoscyamine, salanine, cystisine—is fully equal to that of the most modern pharmacological works. The veratrum alkaloids—physostignine, pilocarpine, taxine, curarine, colchicine, muscarine—and the digitalis group, all receive attention, as well as many others. One of the chief recommendations of this work is the fact that it deals fully with the later poisons. Hardly a substance of a poisonous character has missed the author's attention. A very full description is given of the poisons derivable from living as well as from dead animal substances. The cadaveric alkaloids was the subject of

a very interesting and instructive letter from Dr. Ruttan in a recent number of this JOURNAL. In this communication, the latest views on this very interesting group were given. Of equal interest and importance to ptomaine poisoning stands peptone and poisoning by putrid food. Unfortunately, we, as yet, know very little of this subject, but there is, however, good grounds for believing that this obscurity will, before long, be cleared away. Mr. Blyth deals very fully with the inorganic poisons. Their pharmacology is, however, not so fully dealt with as is that of the alkaloids. In an appendix, the more approved methods of examining blood and blood stains are well given, together with a short account of the treatment by antidotes or otherwise of the different poisonous groups.

Kirke's Handbook of Physiology.—By W. M. BAKER, F.R.C.S., Lecturer on Physiology at St. Bartholomew's Hospital; and VINCENT DORMER, HARRIS, M.D., Lond., Demonstrator of Physiology at St. Bartholomew's Hospital. Eleventh edition. With nearly 500 illustrations. New York: Wm. Wood & Co.

The older editions of Kirke's Handbook of Physiology have been popular with students on account of the judicious admixture of matter, the orderly arrangement of statement, and perspicuity of style. Considerable expectation has been excited as to the form and general character of the new edition. Would it be a really modern book, while it retained its old excellencies? In many respects these expectations have been realized, though not in all. There is a rapidly growing feeling that the physiology to be offered to medical students must be of a richer kind and more scientific than that of the past. It is no longer just to the student of medicine to ask him to accept conclusions without evidence—experimental evidence—so that he may form some idea of the value of what he holds as the principles on which the science and art of medicine are to be built. While this has been to some extent recognized in the present text-book, we should like to have seen it more fully endorsed by the treatment of the subject. It is still necessary

to introduce some coarse, and a good deal of fine, anatomy into text-books meant for beginners in medicine; but when almost half a work on physiology is occupied by anatomy, either coarse or microscopic, at the present day (when several excellent text-books on histology are in the market, and this subject is made one of special study, but often under a separate teacher) we consider that a great mistake has been made. We think histology has been much overdone in the last edition of Kirke's Handbook, and that it has taken some of the space that might well have been occupied by physiological discussion proper. However, many new plates and much new and entirely modern matter has been introduced, and the book will serve a good purpose. Many who have preferred Kirke's book hitherto will still hold to their choice. It preserves many of its old points of excellence, has had added many new ones, but does not, we think, maintain its former balance of matter and treatment. It has been published in two volumes, constituting a part of Wood's Library, thus bringing it before practitioners as well as the ordinay student of medicine.

Books and Pamphlets Received.

A Practical Treatise on the Diseases of Children. By Alfred Vogel, M.D. Translated and edited by H. Raphael, M.D. Third American from the eighth German edition. New York, D. Appleton & Co.

A Treatise on Nervous Diseases, their Symptoms and Treatment. By Samuel G. Webber, M.D. New York, D. Appleton & Co.

Fowne's Manual of Chemistry, Theoretical and Practical. New American from twelfth English edition. Philadelphia, Lea Brothers & Co.

Milk Analysis and Infant Feeding, and Directions as to the Diet of Young Infants. By Arthur V. Meigs, M.D. Philadelphia, P. Blakiston, Son & Co.

The Insane in the United States and Canada. By D. Hack Tuke, M.D., LL.D. London, H. K. Lewis.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Anuual Meeting, October 9th, 1885.

T. G. Roddick, M.D., President, in the Chair.

The annual meeting of this Society was held on Friday evening, October 9th, a large attendance of members being present.

The following were proposed for membership: Drs. R. F. Ruttan, W. McClure, F. G. Findley, S. Gustin and D. W. Eberts.

PATHOLOGICAL SPECIMENS.

Dr. Trenholme exhibited an *Ovarian Cyst* and *Two Extirpated Uteri*, and gave the following particulars:—

The ovarian cyst was removed from Mrs. I., of Shawville, aged 42, of spare habit and nervous temperament. Nine years married; no children. Her illness began 16 years ago, when her bladder troubled her. Feeling of pressure, pain in the back, inability to sit; bowels constipated; insomnia; menses always irregular, but for the last six months has had no flow. At present time, pains are not so severe as formerly, and chiefly felt in the back and over the womb. Upon examination, the uterus is found high up and pressed above the pubis, but in the median line. A large, dense tumor is felt to the back of the womb, filling up the brim of the pelvis. This tumor is firm to the touch, smooth and uniform. On the left antero-lateral aspect of the tumor, a small body is found connected with it. This was thought to be (as you now see it is) the left ovary. The tumor itself reached almost to the umbilicus. The depth of the uterine cavity was three inches. The tumor reached nearly as high as the umbilicus in the centre of the body, and well back toward the spinal column. The diagnosis was doubtful: at first inclined to ovarian cyst, originating with displaced ovary, but subsequently, from consideration of the history and the doubtful mobility of the uterus, etc., this was changed to uterine fibroid. As nothing special depended upon a more accurate diagnosis, the removal of the tumor was clearly indicated. The operation for this purpose was performed 12th Aug., 1885, assisted by Drs.

Kennedy, Cameron, Perrigo and Reddy. There were also present Drs. Lyon, Morrison and Saunders. The usual median incision, three inches long, was made, and when the tumor was reached its real character was apparent. There were many adhesions both to the peritoneum and the uterus, those to the latter quite strong. About O iv of clear fluid were removed by Fitch's trocar, which, by the way, disappointed me in its working. A few bleeding points were secured by hemp ligatures and the sac of the cyst removed. The abdominal incision was closed and dressed in my usual way. The patient did well, the chief after trouble being due to her nervous condition and some irritation of the bladder. Though rather prematurely, she left for her father's home in Iroquois on the 3rd September, just three weeks and one day after the operation.

Extirpation of a Cancerous Uterus.—This specimen was removed from a lady 42 years of age. The general appearance of the patient was that of good health. For some months past she had been suffering from pains in the pelvis and left groin, which had become so severe that she consulted me about her case early in August of this year. Upon examination, the os was found to be cancerous, and the disease had invaded the upper part of the vagina on the left side to a slight extent. The depth of the uterus was about three inches, the organ movable, and in normal position. Believing the diseased tissues could be removed with some chance of success, and of possible temporary relief—at the patient's repeated and earnest request,—the extirpation of the uterus per vaginam was performed on 20th Aug., 1885—seven weeks yesterday. In this, the first and only operation of the kind in Canada that I know of, I was assisted by Drs. Kennedy, Cameron and Perrigo—a number of medical men and medical students being also present. *Operation* —After reaching Douglas' pouch, the fundus was brought down by means of a strong vulsellum ; the right broad ligament was then ligated in small segments and divided. In this there was no very great difficulty, but when I attempted a similar procedure with the left ligament, to my dismay I found it so densely infiltrated with the disease that I had to content myself with dividing the re-

maining structures, guided by the sense of touch alone. There was but slight hemorrhage, and after the removal of the uterus I scooped out a quantity of cancerous tissue with Thomas' serrated spoon. There was some slight hemorrhage a few hours after the operation, which was easily controlled; and but for the escape of the peritoneal fluid, which has given the patient a great deal of trouble, and also kept her weak, she has done well, and is now able to work around her room. I trust, in a few days, she will return to her home. One remarkable feature in this case was the almost entire absence of suffering from the operation itself. The opening of the cavity of the peritoneum, as in this operation, becomes a serious contra-indication to its performance, inasmuch as it cannot be closed by sutures on account of the infiltrated state of the tissues rendering impossible an approximation of the edges of the wound.

Dr. Gardner congratulated Dr. Trenholme on the success of the operation, but thought the case not a good one to select for this operation, as there was ample evidence of infiltration of the broad ligament. In such cases, gouging or scraping is all that should be attempted.

Drs. Kennedy and Hingston also spoke against operating in these cases.

Dr. Alloway gave a short description of a similar case under his care. He thought operating unjustifiable.

Dr. Shepherd asked Dr. Trenholme if his patient was in a better condition now than before operating, or if she was going to live longer. Dr. T. said she would not probably live longer, but she was free from suffering, and therefore better than before the operation.

Fibroid Tumor of Uterus (2 *lbs*).—The second specimen of extirpated uterus is of more than ordinary interest to me, as well as to the profession, because it is the uterus of the first woman who, in January 1876, was spayed for the control of uterine hemorrhage. The first operation gave the patient nearly ten years' lease of a life that was rapidly drawing to a close when the ovaries were removed. In fact, last March she was robust and fleshy, but foolishly undertaking excessive laborious

work, congestion of the uterus was developed, with a distressing train of nerve symptoms that of late threatened a termination of her life. Her attacks of nervous distress occurred every nine days and lasted for nine days, and were followed by loss of flesh and strength. During the attacks the uterus greatly increased in size, and her symptoms were all referable to that organ. As all conceivable treatment, including incision of the tumor, etc., was of no avail, she determined to have the uterus and tumor removed. *Operation*, 24th Sept., assisted by Drs. Kennedy, Perrigo, Cameron and Armstrong, and a number of medical visitors and students being present.—The usual abdominal incision had to be somewhat modified so as to remove the cicatricial tissue of the former wound; this, of course, necessitated the division of a few muscular fibres of the recti muscles. The tumor was firmly packed in the pelvis, and strongly adherent almost all over its surface. The attachments to the bladder were markedly so, and led to the mishap of incising that viscus to the extent of about half an inch. After separating the uterus from its supports, etc., as far as the neck, a wire écraseur was passed around the latter, and tightened just sufficiently to control any hemorrhage. The tumor and uterus were removed by the V incision (as performed by myself many years ago), in the same way as in the last case operated upon in London, Ont., in May 1883. The flaps were adjusted—after carefully securing all the arteries—by the double-running suture, the material used upon this occasion being the prepared iron silk. The bladder was sewed up in a similar manner. The cavity was cleansed and the wound brought together in my usual way by deep silver and superficial horse-hair sutures. A carbolized gauze pad over the wound, held *in situ* by three short straps of adhesive plaster, completed the toilet. It is now two weeks and two days since the operation, and, as the chart of temperature, etc., shews, her convalescence has been a remarkable one. The bladder has given no trouble, and, from present appearances, it will not be long ere this lady, for the second time, will be restored to the active duties of life.

Nephrectomy (*first recorded case in Canada*).—Dr. Hingston exhibited a kidney removed by him for hydronephrosis.

The kidney was made up of a lot of cysts, containing, when pressed, a fluid similar in appearance to ovarian fluid, which became of caseous appearance on evaporation. The parenchymatous structure was all gone. No calculus or obstruction was found. The ureter, at the pelvis, was not discernible—nor exteriorly. The lateral operation was employed; there was no difficulty, and but very little general disturbance followed. The patient had suffered from hæmaturia and great pain in the right side.

Dr. Hingston, on being requested, promised to give a paper on this case at the next meeting. Dr. Shepherd, who had also removed a kidney lately, said he would read a paper on his case at the same meeting.

ELECTION OF OFFICERS.

Balloting for the election of officers for the ensuing year then took place, with the following results:—

President—Dr. T. G. Roddick (re-elected).
First Vice-President—Dr. J. C. Cameron.
Second Vice-President—Dr. Geo. Wilkins.
Treasurer—Dr. James Perrigo.
Secretary—Dr. D. F. Gurd (re-elected).
Librarian—Dr. T. D. Reed (re-elected).
Council—Drs. Geo. Ross, Kennedy and Rodger (re-elected.)
Publication Committee—Drs. Kennedy, Geo. Ross, J. C. Cameron, and Bell.

Dr. Roddick thanked the Society for the honor done him, and said that at some future time he would give an address on the history of the Society.

A vote of thanks was tendered Dr. Molson for his past services as treasurer.

Dr. Hingston said that nine years ago, during an epidemic of smallpox, the Society passed several resolutions upholding vaccination, etc. He thought it might do good to endorse these now, and proposed the following resolutions:—

Be it resolved,—That this Society reiterates the opinion expressed nine years ago in favor of vaccination, and considers it to be the duty of every physician to diligently encourage, at the present time, the practice of vaccination and re-vaccination.

Resolved,—That the Secretary be authorized to publish the above resolutions in the city press.

Special Meeting, October 12th, 1885.

T. G. Roddick, M.D., President, in the Chair.

A special general meeting of the Society was held to consider what action it should take with reference to the proposed appointments by the Board of Health of a committee of physicians to visit at times and report upon the Civic Smallpox Hospital.

It was unanimously resolved :—

First,—That the Society has learned with much satisfaction of the completion of ample hospitals for the reception and satisfactory treatment of several hundreds of smallpox patients; that, judging from the reports of many medical gentlemen who have inspected the buildings, this Society is satisfied that the hospitals are eminently suited for the purpose intended, and will materially aid in giving the health authorities control over the present epidemic.

Secondly,—Whereas the members of the Society have learned of many incidents forcing upon them the conviction that the management of the Civic Hospital has been very far removed from what it should be to merit the confidence of the public, and they are aware that this feeling has prevented many physicians from advocating isolation of their patients by removal to the hospital, as well as caused many patients to refuse to leave their homes. Be it now resolved that, as it is of the utmost importance to secure public confidence in the entire management of the Mount Royal Hospitals, the Medico-Chirurgical Society respectfully urge upon the Board of Health the necessity for the appointment of a committee of well known physicians whose duty it shall be to visit the hospitals at stated periods, examine into the management of all the departments, and report to the Board. Resolved, further, that it be a recommendation to the Board of Health that this committee consist of five members, to be composed of one from each of the medical schools and one from the profession generally.

Thirdly,—Resolved, that the members of this Society, having learned that it is the intention of the Board of Health to appoint two resident physicians, one for each section of the Mount Royal hospitals, they hereby express their approval of such action, believing that it will be conducive to the best interests of the patients.

The Secretary was instructed to forward these resolutions to the Board of Health.

The meeting then adjourned.

CHATHAM MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, Oct. 15th, 1885.

Two cases of saturnine poisoning with an uncommon symptom.—Dr. McKeough related the history of two cases of lead poisoning, with a relaxed condition of the bowels. The subjects were man and wife. The husband had been engaged in painting for a year; the material he used was wholly a cheap green paint; his wife washed his clothes, which were often saturated with paint. The wife had been suffering for two months previous to coming under observation with progressive anæmia, cachexia, anorexia, nausea, vomiting, colicky pains in the abdomen, and a relaxed condition of the bowels, with loose, slimy, offensive stools. When seen she had the usual phenomena of plumbism, earthy hue of skin, fœtid breath, metallic taste, blue dental margin, depressed, anxious countenance, and slow pulse. Under the use of iodide of potassium and hygienic influences she slowly recovered. The husband was taken ill six weeks subsequently, and suffered from the same symptoms, his recovery being more rapid under a similar form of treatment.

In the discussion which followed, most of the members present considered that the arsenite of copper, which is present in green paints, may have been the cause of the unusual symptoms in these cases.

Sprained Ankle.—Dr. Bray introduced for discussion the subject of "sprained ankle." After referring briefly to the pathology of this injury, he took up in detail the best form of treatment to be adopted in accidents of this nature. The principles of treatment he recommended were: To restore the parts to their normal position, to check effusions, and promote absorption of blood and lymph already poured out. To accomplish this, when patient is seen immediately after the accident, the injured parts are showered with ice-water, after which flexion and extension is made to replace injured parts; the joint is then covered with cotton wool, and a rubber bandage applied, or, preferably, a plaster-of-paris dressing. Dr. Bray recently had two

severe cases under his care treated by the latter plan with happy results. After one or two week's rest obtained in this manner, the dressings were removed and passive motion used for a few days. In cases that have not been treated promptly or properly, and which come under one's observation later, when the movements of the joint have been fettered by adhesions, then he resorts to active movements, friction, electricity, and the actual cautery, in the hope of restoring the joint to its original condition.

Discussion.—Dr. Backus took exception to some points in the pathology of the paper. The swelling in the acute stage of sprains was not entirely due to hemorrhage, but chiefly to the effusion of serum and lymph. He considered that rest was the chief indication for treatment in early stages.

Dr. McKeough thought the subject an important one, as injuries, which are apparently trivial at first, often result, if neglected or unproperly treated, in serious disease of the ankle joint. He prefers hot water to cold in recent cases; the foot is placed in water as hot as can be borne, maintaining the temperature at that heat, and continuing its application for ten or twelve hours, a roller bandage is then applied from the toes upward, being careful to make equable pressure on all parts. In chronic cases, he makes use of massage, passive motion, and the actual cautery.

Dr. Flemming considered that sprains of the ankle joint varied much in degree and character, and each accident should be treated upon its merits. He would not make flexion or extension in acute cases unless tendons were displaced, which was the exception in sprains of the ankle joint. In ordinary cases, he applied a roller bandage at once, which often gave immediate relief. If very painful, and pressure unbearable, used hot water, gradually increasing the temperature of the water to 120°F.

Dr. Tye said that chronic trouble in these cases was due to the non-absorption of effused lymph, and treatment should be directed towards producing the speedy absorption of the lymph thrown out Preferred hot water, rest, and pressure by means of absorbent cotton applied about the joint, and an elastic bandage. Had not much faith in plaster-of-paris dressings. In

chronic stages rest is not indicated ; the object is now to break up the adhesions by manipulation and friction ; if the joint is painful and tender, the actual cautery is most useful.

Dr. Holmes thought that the natural history of neglected cases of these injuries furnished indications for treatment. The lymph which is thrown out soon organizes and contracts, compressing nerves and impeding the circulation. The first object of treatment is to prevent, as much as possible, effusion by means of rest and pressure. Had used with good results thin slices of sponge placed about joint and then a bandage, keeping the whole wet with hot water. In chronic cases, manipulations and passive motion suffice when there are no strong adhesive bands ; if these exist, forcible rupture of these is necessary under an anæsthetic. He has also found the actual cautery most beneficial in promoting absorption, relieving pain, and improving the circulation. In children, the epiphyses are frequently injured at the time or become diseased secondarily ; when this occurs, manipulations even in the later stages are dangerous.

Dr. Rutherford did not approve of cold water ; favored bandaging as quickly as possible. Had used the faradic current with benefit in some cases.

Dr. Bray, in reply, stated that he thought he was misunderstood in reference to cause of swelling. Had always been satisfied with ice water showered upon the joint for an hour or more, which numbs the parts and gives great relief. If case seen early, before much swelling, might apply bandage at once. Was much pleased with discussion elicited, as he thought the subject interesting and practical.

CANADA

Medical and Surgical Journal.

MONTREAL, NOVEMBER, 1885.

NEW BUILDING, McGILL MEDICAL FACULTY.

Two months ago we gave a detailed description of the building then in course of erection for the Medical Faculty of McGill University. The work was pushed rapidly forward, and the lecture-rooms were quite complete by the 1st of October, when the session was begun. It required, however, a short time to complete the fittings, &c., of the various laboratories, and the formal opening of the building was postponed until the 22nd. At 3 p.m. a large assemblage was gathered together in the main lecture hall to listen to addresses from distinguished friends of the University and the Faculty. The Dean of the Faculty, Prof. Howard, occupied the chair, and there were present, amongst others: Provost Pepper and Prof. Osler, of the University of Pennsylvania; Sir Wm. Dawson, Principal of McGill University; Hon. Senator Ferrier, Chancellor; Hon. Justice Torrance, Hon. Justice Mackay, Hon. Donald A. Smith, Mr. John H. R. Molson, Mr. John Molson, Mr. R. A. Ramsay, Mr. Hugh McLennan, Mr. W. C. McDonald, and Mr. Geo. Hague, Governors of the University; Dr. H. Aspinwall Howe, Prof. Alex. Johnson, Rev. Dr. Cornish, Rev. Dr. Wilkes, Rev. Principal McVicar, of the Presbyterian College; Rev. Dr. Stevenson, Principal of the Congregational College; Rev. Prof. Murray, Prof. Henry T. Bovey, Dr. B. J. Harrington, Rev. Canon Henderson (Principal of the Montreal Diocesan Theological College), Dr. Grant of Ottawa, Mr. R. W. Shepherd, Dr. J. L. Leprohon, Dr. McEachran, V.S., Prof. Moyse, Dr. F. W. Campbell, Surgeon-General Bergin, M.P., Rev. Prof. Coussirat, Rev. J. Edgar

Hill, Mr. Alexander Murray, Mr. Richard White, Mr. Andrew Robertson, Dr. Rottot, &c., besides all the members of the Faculty and a body of about three hundred students.

The DEAN called upon Prof. Osler of the University of Pennsylvania to deliver the opening address. So warm is the affection entertained for Prof. Osler at McGill University that he is always sure of a hearty reception. The students greeted his appearance with prolonged cheering.

DR. OSLER said—To realize the hopes and longings of ten years, to witness the fulfilment beyond expectation of schemes which have occupied my thoughts sleeping and waking, and, finally, to participate in their consummation, is a measure of happiness not often meted out to a child of man. But such I may claim to be mine to-day as I stand here among you. It is a joy to me to stand here as an *alumnus* of McGill and witness the success which has attended the efforts of the medical faculty to extend the working powers of the school, and to express the gratitude which every member of the profession in this country must feel towards those generous men who have enabled those changes and improvements to be effected. Let us remember that the esteem in which this school is regarded by the profession and by the public is not the growth of a year or of ten years, nor is it all to be attributed to the generous men now in charge. A large part of it is the result of that undying influence which each faithful worker has exercised. It is due in part to the spirit of those who have passed away—Stephenson, Holmes, Sutherland and Campbell. (Applause.) I wish particularly to refer to the laboratory work in McGill College in future. As the most important function of a medical school is to teach existing medical knowledge, so it is known to you all that a great change has come over the mode of teaching. When I entered the halls of McGill some fifteen years ago, with the exception of practical anatomy, practical chemistry, practical medicine and practical surgery, the teaching was entirely theoretical. The object of this beautiful new building is still further to improve the practical work of the school and its practical teaching. In this new building the students will be able to see laboratories devoted to practical physiology, pharmacology, pathology and histology. These have been rendered necessary by the demands of modern medical education. To be effective, laboratory work must, in the first place, have plenty of time on the part of the student, and for this the time has been so arranged that the first two sessions are almost exclusively devoted to the practical department work. And in addition to the time which is necessary for careful instruction, industrious and laborious men are required, and the professors should be men well up in the scientific department over which they have control, men who are enabled to devote a large part of their time to the work, and who have been thoroughly trained in the modern methods of work. There must also be well equipped laboratories, and by a well equipped laboratory we mean not only plenty of accommodation, but an abundant supply of modern appurtenances, careful and well trained assistants. To extend scientific work so as to gain a reputation for any school, there must be in connection with the laboratories young men who, under the supervision and control of the professor, are enabled to do original work. This work should not be entrusted to students, for they have as much as

they can do in the four sessions to thoroughly master the subjects necessary for the degree. This work should be bestowed on men who have already passed through their medical course, and who can spare the time and expense to devote a few of the earlier years of their life to original work and research. To this object I most earnestly hope that my *alma mater* in all her departments will quickly turn her attention, as she has already done in other matters. Of the future of this University school this gathering to-day augurs well. In the sixty odd years which have passed since the founding of McGill, the labors of those in charge of it have been numerous, and the work which has been accomplished has been grand. So in the next half century the progress will be equally grand, if not grander. (Applause.) I need scarcely say in conclusion, gentlemen, how delighted I am to be with my old students again. It is a joy to me to be here amongst well known faces on an occasion which marks the progress of your school. I am always glad to be amongst the students wherever I am, because they are good fellows, and I can always get on with them. (Loud applause.)

The DEAN then called on Provost Pepper of Philadelphia to address the meeting.

The PROVOST, who was received with great applause, said:

Sir William Dawson, Members of the Faculty of McGill University, and Gentlemen:—When I received the very kind invitation of the Faculty of your medical department to be present on the occasion of the opening of the new laboratory building of McGill University, I felt constrained to accept (though at serious personal inconvenience) by a variety of motives. The great pleasure of revisiting your beautiful city was a strong inducement of itself; and even stronger was the hope that I should meet those whose friendship it has been my privilege to enjoy, as well as others whose names have been long familiar for their learning, their achievements, or their philanthropy. (Applause.) I knew that I should find McGill University all alive with that fine activity in her various departments which has enabled the struggling college of less than half a century ago to become the vigorous and full proportioned university whose influence is felt throughout the continent, and felt invariably, I may truly say, on the side of sound learning and healthy progress. I knew that I should find in the recent additions to her academic buildings and facilities models to admire for their fitness to the purpose in view, and that they would inspire me as fresh evidences of a widespread determination on the part of the people of this vast country that nothing shall be withheld which is needed for the diffusion—east, west, north and south—of the priceless blessings of sound, pure, high education. (Loud applause.) Need I say that I have enjoyed this pleasure: that I have been permitted to realize this hope; that I shall carry away with me this fresh assurance and inspiration, and in larger measure than I had ventured to anticipate from so brief a visit? But I have not yet alluded to the feeling which, above all, constrained me to attend these interesting ceremonies. This was my conviction, that the building to be formally opened to-day was, if I may venture to use the expression, the final proof that McGill University has chosen the path of true progress rather than that of selfish profit in regard to medical education, and has determined that in the future, as in the past, the interests of the community and of scientific truth shall be held infinitely above the personal gains of the teachers who labor in these halls. (Applause.) There has been a hard struggle during the past twenty-five years to

elevate the standard of medical education in America and to bring its methods into harmony with the swiftly changing condition of natural science. Happily this struggle is over, and the educated sense of the community, lay as well as professional, has learned to recognize in the graduates of such schools as those of the University of Pennsylvania, of Harvard, and of McGill University the best representatives of the healing art. If I needed an illustration of this, I should find it close at hand in one of your own graduates, whose brilliant scientific attainments have won for him unusual distinction and honors in his native land no less than abroad, and who has recently been called to fill one of the leading chairs in the oldest and most distinguished medical school of the continent. May I not add that in this new position he is sustaining the high reputation and winning the same strong personal attachments which he enjoyed here? It would be difficult to convey to anyone not familiar with the subject an adequate conception of the changes recently effected in medical education and in medical practice. I left Philadelphia yesterday afternoon, dined satisfactorily on the train, passed a comfortable night, and found myself in Montreal early this morning. Unhappily, I am forced to leave by the afternoon train, and I expect to travel safely, and with equal precision, comfort and speed, back to Philadelphia by to-morrow morning. Steam, electricity, the highest attainments of physical science and the most perfect mechanical appliances, with thorough training and discipline, render this seeming miracle an everyday occurrence. Fifty years ago I should have reluctantly entrusted myself to the rude mercies of a mail waggon, and a month would have been spent in the journey to and fro, even if the perils of flood and mud, of breaking down and upsetting did not give additional and unwelcome variety and duration. It might be extravagant to assert that the change between the medical man of the last century and of to-day—between the old medical method and the new—is as great as between, let me say, the general manager of the Grand Trunk railroad and the most skillful jehu who then drove His Majesty's mail coach. (Applause.) But in fact the change is no less real and important, and has been brought about through the operation of the same influences. With the introduction of exact methods of scientific research, the development of organic chemistry and the invention of the microscope and other instruments of precision, the entire field of medical science underwent rapidly a marvellous change. The ancient burden of tradition and of blind allegiance to eminent authority fell from men's minds, and their eyes lifted to behold the truth as it is in nature and in nature alone. No need now to dwell upon the swift development of rational medicine which has followed. But this much at least may be asserted, that at this day it were no more reasonable to cling tenaciously to the school doctrines of Galen, of Brown, of Broussais, or of Hahnemann than to cross the continent on a buck-board instead of in Pullman coach. In all medical schools of the first rank—high in which honorable line stands McGill—this new scientific method of medical education is firmly established. The struggle to secure it has been a hard one. In the United States, and to a much less degree in Canada, powerful prejudice, the vested interests of an excessive number of competing schools, and the great cost of the buildings and outfit requisite for the successful establishment of a full graded course of medical education with the attendant technical training, has hindered and deferred its development. A few years ago I took occasion to indicate as plainly as I could the grave defects of medical education as it then existed in the United States—and unhappily still does exist save in a few schools —and the reforms which were obviously needed. The latter were:—

1st, the establishment of a preparatory examination; 2nd, the exaction of a period of collegiate studies of at least three years of eight or nine months each; 3rd, the careful grading of the courses; 4th, the introduction of ample practical instruction of each student, both at the bedside and in laboratories; 5th, the establishment of effective examinations, both written and practical, at the close of the course of study of each subject, in lieu of the unsatisfactory oral examinations in common use; 6th, the endowment of medical shools so as to secure fixed salaries for the professors, who would then cease to have any pecuniary interest in the size of their classes. If you can appreciate the devoted and self-sacrificing toil needed to keep the standard as high as the claims of science and the interests of the community demand, while a faculty is constantly subjected to the temptation of entering on a more profitable and facile course, you must cheerfully award the highest praise to the earnest and gifted men whose labors have for forty years maintained the medical department of McGill University in the true path. In 1846, the University of Pennsylvania, whose medical department is the oldest medical school in America, made an unsuccessful attempt to elevate the standard of medical education; but it has not been till within the past fifteen years that the necessary reforms have been securely adopted by a few of the leading colleges there. In McGill University, on the other hand, ever since 1848 a preliminary examination has been required; the course of study has extended over four years, and has been carefully graded, while from time to time such important subjects as medical jurisprudence and botany have been added to the compulsory list; an admirable system of bedside instruction has been developed, and the final examinations before graduation have been rendered practical, searching and impartial. In dwelling with justifiable pride on such a record it might seem pardonable to overlook the shortcomings and defects which have remained. But the interesting ceremonies of to-day prove that the same spirit which animated the men of the past—your Stephenson, Holmes, Caldwell, Robertson and Campbell—still inspires their worthy successors. (Loud and long continued applause.) You see to-day that their efforts, seconded by the powerful influence of one under whose skillful guidance all departments of McGill University have made rapid strides during the past thirty years, have supplied one of the remaining great needs of the medical school. In this splendid building the students of medicine will hereafter be taught in the only way which can possibly bring out their best powers. The most eloquent discourses by the most learned professors can but impart facts, teach the methods of correct reasoning, expound the laws of pathology which have been established, and furnish illustrations from the rich stores of experience. This is valuable and essential instruction, but no amount of it will train the student to use his own eyes and hands in the practical investigation and recognition of disease. The laboratories of anatomy, of chemistry, of physiology and of pathology, and later the wards of the hospital are the real educators in this, the most important portion of the training of a medical man. It is in them alone that can be produced physicians, who shall be neither theorists nor routinists, but clear-sighted, practical students of nature as revealed in the myriad forms of morbid action, and in the no less numerous agencies for the prevention or cure of disease. From the labors of these well-trained physicians of the future shall spring the highest physical welfare of the individual and of the state. (Applause.) Results await them far transcending all that have yet been attained; the detection of the subtle causes of deadly maladies; the discovery of remedies whose

specific power shall rival that of quinine in malarial fever; the establishment of means of prevention no less sure than Jenner's precious gift of vaccination, the culpable neglect of which in a small area is even now showing a startled people horrors from which they are secured. Such is the lofty task imposed upon medical science. Real progress will be slow, errors numerous, excess in one direction often ill corrected by excess in another. But through the weary struggle, no doubt of ultimate success can be harbored so long as our methods are rational, our zeal unselfish, and our aim stamped with the fine old motto of Boerhaave—"Simplex Sigillum Veri." It is easy to see the widening range of medical influence in modern life and legislation. The advancing intelligence of the community recognizes more and more clearly in the medical profession, a body of men who, while possed of their full share of human weaknesses and class prejudices, still do labor faithfully for the most vital material interests of the race. As positive knowledge has increased, the assumption of mysterious powers become almost obsolete, and relations of far more real confidence and respect have been established between the medical profession and the community. And with this growth of public interest in general medical questions and of public confidence in the medical profession there must necessarily develop in the community a sense of responsibility and obligation towards those institutions which are honestly doing their share towards supplying it with well educated, practical physicians. Hitherto it has been the custom to regard medical colleges as in a peculiar sense the property and charge of medical men. In no other way can we understand the remarkable apathy of the public towards the abuses which might exist in their management and teaching, and towards their claims for endowment upon the generous patrons of learning. All must have been struck with the fact that, while tens of millions have been given during the past half century for the support of classical and scientific education, the general movement for the endowment of medical schools is of very recent origin. Within the last decade, however, a number of munificent gifts and bequests have been received, which show that at least the interest and approval of the community have been awakened by the earnest efforts made in various colleges to place medical education on its proper basis. The splendid gifts of Johns Hopkins, of Mrs John Rhae Barton, of Vanderbilt, of Carnegie, and of your own liberal benefactor, the Hon. Donald A. Smith (loud applause which lasted for several minutes,) the countless smaller ones which have erected such stately buildings as the medical halls and laboratories of Harvard and the University of Pennsylvania, and finally this noble structure of your own, attest this truth. The movement has but begun however; but since it has become apparent that no gifts promote more directly the best interests of the community than do these in support of the new and higher medical education, we may confidently expect to see it advance until all deserving medical schools are fully endowed. The amounts needed are large. There are several chairs in each faculty, the incumbents of which should receive an ample fixed salary, since their time must be devoted to scientific work, which brings no other remuneration. These professorships should all be fully endowed. The increased time required for a medical education, and the higher preliminary preparation exacted from those entering on it, involves so heavy a drain on the student's resources that some of the worthiest are reluctantly forced to seek their diplomas at schools of lower grade. This should be obviated by the establishment of an ample number of scholarships to be awarded on the results of competitive examination. Further it is essential that the great medical

schools shall be centres not only of teaching, but of elaborate original investigation upon such subjects as the causes of disease and the action of remedies. Who is not familiar with the profound researches of recent years upon the nature and causation of consumption, of diphtheria, of cholera? Such investigations must be carried on in laboratories, such as you have constructed here, and there should be in connection with every such institution a number of well endowed fellowships tenable for one year or longer, so that encouragement and support may be given to those scientific men who are able and willing to devote themselves to these researches. Does anyone question the practical value of these elaborate and costly studies, and the wisdom of expending large sums for the equipment and endowment of such original research? Happily the day has come when even in this practical country, there is a growing recognition of the importance of pure science, and of the influence of abstract scientific investigations upon our material welfare and progress. It might seem extravagant to provide spacious rooms, expensive outfit, and large endowment merely for the study of a few of the lowest and most minute forms of organic life. But it is not extravagant to assert that if such study led to the discovery of the true cause of any one of those great diseases it would be of more practical value to the world than all the gold fields of another California. Lastly, although we look with proud satisfaction on such buildings and laboratories and equipment as these, we must not remain contented. The progress of medical science is rapid and unceasing. New fields of investigation are continually being opened in this as in other branches of natural science; new methods of research are being introduced; enlarged facilities will continue to be required from time to time; and ere long other spacious buildings must be erected. But the achievements of the past and of the present are the sure guarantees of the future. We advance with increasing confidence because assured of the co-operation and support of an enlightened public sentiment. Here in Montreal, at least, such confidence may be most reasonably entertained; for no one can doubt that whatever are the just demands of education and of science in the future, they will be generously supplied by the fellow-citizens of McGill, of Redpath, of Mackay, of the Molsons, and of Donald A. Smith. (Loud applause.)

Hon. Chancellor FERRIER reviewed briefly the rapid progress made in medical education at McGill University, and contrasted the dingy rooms they were condemned to occupy only a few years ago with the palatial establishment now under their control. He congratulated the Faculty very heartily upon their new acquisition, and predicted that the next move would be towards the admission of female students.

The DEAN then called upon the Vice-Chancellor, Sir William Dawson. The distinguished Principal was received with tremendous cheering.

SIR WILLIAM DAWSON said—I have very much pleasure in congratulating the Faculty of Medicine on my own behalf and that of the University upon the progress which it has made, and especially upon the evidence of that progress in this building which we are met to take

possession of to-day. It is an especial reason for gratification to me that one so well qualified as Provost Pepper, and so extensively known for his own successful efforts on behalf of higher education, should have borne so cordial testimony to the higher qualities of our medical education, in which the ceremony of to-day marks a new and important stage of progress. The Medical Faculty of McGill, whose efforts I have known and appreciated for thirty years, has always aimed not at the cramming of young men for examinations, or at giving them in the easiest way a minimum of qualification to enter on medical practice, but rather at the cultivation of a thorough professional training, scientific as well as practical, and to elevate that profession, to raise it to a higher position than it has hitherto enjoyed in this country or elsewhere. (Applause.) Its efforts in this way have been appreciated by the citizens of Montreal, to whose liberality, by voluntary contributions, it is due that the present extension of the building of the faculty has been provided. (Applause.) That is not only something to congratulate the faculty upon, but also Montreal itself; it is something to be able to say that there is no other city in Canada the citizens of which have put their hands in their pockets, in the manner in which the citizens of Montreal have done, in order to advance the interests of education in this great profession. (Applause.) I would like also to congratulate you, students, upon the new and better provision which has been made for you. You cannot be expected fully to appreciate the differences between the medical training of fifty years ago and that now provided for you. Dr. Pepper has referred to the great advances which have been made in science and art, and no science or art has advanced more than that noble one represented by this faculty. I have no doubt that many of the most eminent members of the profession around me would gladly, if they could, put off their burden of years and change places with you. Bear in mind, however, that added privileges imply added responsibilities. You are expected to avail yourselves to the utmost of the advantages provided for you, and we may hope that some of you may be able to advance the science of medicine in some of those directions in which it is evident that advance may be made, so as to leave it better than when you found it. (Applause.) Dr. Pepper has referred to some of the most terrible diseases which affect humanity, and of which the causes and methods of prevention are yet involved in obscurity. May we not hope that in reference to these, discoveries may be made by some of the rising generation of medical men which may associate their names with that of the discoverer of vaccination. The presence here to-day of representatives of all the faculties and associated colleges, and of so many leading citizens, should be taken as an evidence of the interest which is felt in this faculty, and you, students, should learn from this and from the liberal aid given by the citizens that in Montreal you are among the friends of education and professional training, and that we are all anxious to advance those interests and through them the welfare of the world at large. The presence here to-day, on his eighty-fifth birthday, of your venerable chancellor—(loud and prolonged applause)—who has witnessed the whole history of the medical faculty since its first small beginnings, and the testimony he has borne to its vital importance to the interests of the University, should also be a source of encouragement for the future. (Loud applause.)

The DEAN then briefly addressed the meeting, speaking feelingly of the generosity of the citizens which enabled them to celebrate the important event of the day, alluding to the changes

which the possession of new laboratories enabled the Faculty to make to advance the practical teaching of the several branches, and thanking the various gentlemen, and especially Provost Pepper, who had been kind enough to assist upon the occasion.

Surgeon-General Bergin, M.P., also offered his congratulations as an old student of McGill upwards of 50 years ago.

The proceedings then terminated, and the visitors inspected the buildings, all expressing themselves much pleased with the spacious lecture-rooms and well-equipped laboratories.

In the evening a dinner was given by the members of the Faculty to commemorate the event. A large and distinguished company were present, composed of representatives of the various faculties, from sister Universities, benefactors of the College, eminent citizens and journalists. The Dean presided.

After the loyal toasts, that of "The President of the United States" was responded to by Dr. Anderson, the newly-installed Consul-General of the United States.

The Chairman then gave "Medical Education in the United States and Canada." He regretted that they were disappointed in not having present any of their confrères of the United States. Speaking for medical education in the States, he was glad to say that the tendency had been on the side of progress. It was no longer possible for a man to be admitted to the study of medicine and get his license after two years. The higher medical educational establishments insisted on a good general education and a three or four years' course. In Canada they, many years ago, attained this high position in the profession. Regarding the matriculation examinations for medicine, he was of opinion that, while classical education should not be forgotten, mathematical and physical science should have a prominent place. In the Dominion of Canada they had long since had a four years' academic course, and as they had seen at the opening of the new building that day there was a strong effort being made to unite practical with didactic teaching. He felt that Canada had reason to be complimented on the high position she had attained in medical education. (Applause.)

Professor Osler, in responding, said that when he that day visited the school with which he was connected for ten of the happiest years of his life, it seemed that in the short year that elapsed since he left McGill they had made more progress than for the ten years he was connected with the college. So recently had he been with his brethren south of the line, he might feel excused if he did not refer to the many anomalies that existed in the profession in that country. How it was that such a shrewd, practical people as those in the States should have drifted into such a loose, slipshod way of conducting medical schools was unintelligible. To think that in one or two sessions in some schools and three sessions in only a few, a man should be considered qualified to take charge of the most important

lives in the country, was indeed an anomaly. This arose from the abuse that anyone with sufficient influence could get his charter as a medical practitioner from the state legislature. In Canada there was a brilliant contrast. A man needed to be educated before he commenced the study of medicine, he had to pass through four sessions in college, and he had to pass an intricate examination before he obtained his license. The people of Canada ought to appreciate this, because they were in the care of experienced, educated men, and not in the hands of quacks and charlatans. In Ontario and Quebec, medical men were in advance of any of the States, and even ahead of the older countries, because in Ontario they had an examining board which every practitioner from another country had to pass before obtaining leave to practice. What was now to be considered in Canada was the advancement of practical and scientific teaching in medicine—such an education as was that day inaugurated in McGill. (Applause.) That Montreal had taken the first step in practical medical science was a real source of pride, and that Montreal should be the same pride to Canada that Edinburgh is to Scotland should be the prayer of every Canadian.

Dr. Rottot, Dean of the Faculty of Medicine in Laval, speaking in French, said that he endorsed the remarks of Professor Osler with regard to the importance of practical and scientific training in medicine. He congratulated the faculty of McGill on the addition which they had received to the buildings. Referring to the medical profession in Canada, he said that it deservedly occupied a high place in the reputation of the world, and he believed that with the progress which every day was being made it would occupy a still higher position. (Applause.) He felt sure that in this march of progress the School of Medicine of Laval would be ready to take its place. (Applause.)

Rev. Dr. Stevenson proposed the toast of "The profession of medicine, its relation to, and claims on society." In the course of a speech replete with characteristic eloquence the reverend gentleman said that the medical profession did not look upon man as a purely physical being, nor as a purely intellectual being. It looked upon him as the highest type of a vital being, and the prime state of man was his vitality. They could expect nothing social, nothing moral, nothing religious, until they had vitality, and the medical profession must be very near the noblest of all professions when it took charge of vitality in man. It appeared to him that there were very close connections between the medical profession and the life of society. One very close connection was that a great many human beings would not have been able to struggle into life at all were it not for the presence of the medical man at his birth. (Laughter.) The importance of the profession would appear when it was known that the slightest inattention or want of skill at this important period of life might make a future Shakespeare a Milton, or a Newton an imbecile. If the connection was such at the beginning of life, there must, indeed, be a very close and intimate connection all through life between this noble profession and the interests of humanity. Education was intended to bring into close and harmonious development all those varied powers which, taken together, constitute the highest and noblest humanity. How could they expect to do this without the assistance of their medical friends? It was all very well for the Arts graduates on one side of McGill University to think they could work by themselves. It was all very well to imagine that they in the pulpit could do the work by themselves, but they could neither have active morality nor education

without good health and the knowledge of the laws that govern mortality. He spoke of the trusted position which the medical attendant occupied in the family, a position which required ability, integrity and high moral character, and he was glad to be able to say that all those attainments were possessed by the medical practitioners of Canada. He did not know much about drugs, but he could say that one cheering word from the doctor was better than any drug he had ever taken. He congratulated the medical profession in Canada on the progress of medical education in Montreal; he congratulated the city of Montreal on what she had already done and upon what she would do. In conclusion he said that in his ideal a perfect physician was a perfect man, and of the physician it might be said, as was said of the perfect ideal of humanity, "He went about doing good. (Loud applause.)

Dr. Hingston, in responding, said that the duties of the profession to society were clear in principle, but difficult in practice. The principles of society were changing, but medical men must do their duty to themselves. There was a time when culture and education and knowledge were the passports to the highest society, but this was changed. Johnson, in his time, spoke of medical men as the first gentlemen in every society. All the joys of life, the poet Pope wrote, were included in health, peace and competence. He gave prominence to "health," for without it competence had no joy and peace could not exist without health. (Applause.) He concluded an able address in congratulating the city of Montreal on the progress of medical education.

Sir William Dawson proposed "Our Benefactors." He said that the present position of McGill was due to the men of princely and liberal minds, residents in the city who increased the endowment and made its educational mission what it was to-day. Shortly after he came first to Montreal the income was $500 a year. Now the capital of the institution was over $1,000,000, and the greatest part of this was due to "Our Benefactors." (Applause.)

Mr. Donald A. Smith on being called upon to respond, was cordially applauded. In reply he said that he felt that all the contributors to the funds of the McGill University must feel it an honor to be associated with that institution. They must look upon it as an honor to be connected with the honorable gentlemen of the medical faculty. That night they had heard from eminent professional men from the United States and Canada, notwithstanding the high position of the medical profession in Canada, how necessary it was to still improve the facilities for medical education. On the part of the contributors to the medical faculty, he should say that their desire was to see this progress, and their efforts would be directed to give further and to induce others to give liberally for the cause of education.

Prof. Craik proposed "The Medical Associations," coupled with the name of Dr. Grant, who responded in an eloquent speech.

Dr. George Ross proposed "The Medical Councils." He said that these important bodies had in their care the management of all on which depended the best interests of the profession. Although in existence but a few years, the opinion was unanimous that to them was largely due the fact that the standing of the profession in Canada was deservedly so high. They had ensured that every man admitted to the practice of medicine had received a fair general education and was also in possession of good medical knowledge. They had done much to raise the standard of education in the Dominion, to prevent imposition, and to protect from quacks and charlatans. The

public admitted this, and accepted their licenses as a fair passport to their confidence. McGill University, he was proud to say, had always been loyal to the councils, and urged students to comply faithfully with all their requirements. The assessors or visitors from the governing body in this Province are always welcomed to her examinations; the freest scrutiny is always courted, as she is convinced her teaching will be found even in excess of that demanded.

Dr. Bergin, M.P., President of the Ontario Medical Council, responded. He alluded in a forcible speech to the good that had been accomplished since the establishment of the Council, the care taken in the selection of examiners, the strictness of its tests, and the satisfaction generally expressed with the results obtained.

The toasts of "The Ladies" and "The Press" were duly honored, and

Dr. F. W. Campbell, Dean of the Medical Faculty of Bishop's College, proposed the health of Prof. Howard, the Chairman, to whose exertions so much of the success recently accomplished by the Faculty was due. The toast was received with great enthusiasm.

THE PROVINCIAL MEDICAL BOARD.

The Provincial Medical Board held its semi-annual meeting at the Laval University, Quebec, on Wednesday, Sept. 30, 1885. There were present—Dr. Lemieux (President), Drs. Belleau and Campbell (Secretaries), Dr. Léonidas Larue (Registrar), Dr. E. P. Lachapelle (Treasurer), Dr. Marsden, Dr. St. George, M.P., Dr. Parke, Dr. Russell, Dr. Marmette, St. Thomas; Dr. Gingras, St. Sauveur; Dr. M. Guay, M.P., St. Romuald; Dr. Rousseau, St. Casimir; Dr. Rinfret, M.P., St. Croix; Dr. Lafontaine, St. Edouard de Napierville; Dr. Desaulniers, Nicolet; Dr. Thos. Larue, Compton; Dr. Hart, Bedford; Dr. Jules Prévost, St. Jerome; Dr. H. A. Mignault, St. Denis; Dr. Ladouceur, Sorel; and Drs. Kennedy, Howard, Leprohon, Durocher, Ross and Rodger, Montreal.

A resolution of condolence was adopted upon the death of Dr. Jackson, who has been replaced upon the Board by Dr. Simard, Professor of Laval University.

The reports of the assessors, of the examiners for admission to the study of medicine, of the treasurer, and of the agent of the Board were read and adopted.

It was proposed by Dr. Lachapelle, seconded by Dr. Campbell, and resolved—That a committee composed of Drs. Lemieux, Ross, Hingston, Lachapelle, Austin, P. G. Migneault, Marcil, Marsden, Desaulniers, Rodger, Guay and N. Larue be appointed,

with instructions to prepare all amendments to the Medical Act necessary to carry into effect the various clauses of the report of committee on finance, which has been adopted ; also to meet the suggestions made at the last triennial meeting concerning the election of members of the governing board, to make the preliminary examinations as equitable as possible both for the candidates and for the profession, to make the laws against those infringing them as severe as possible,—in a word, to suggest any amendments which may be considered in the interests of the profession ; that this committee proceed without delay, in order that the amendments may be submitted to a special meeting of the Board prior to the next session of the Legislature ; that the travelling expenses of this committee be paid by the College, and that the committee meet at Montreal.

Moved by Dr. Belleau, seconded by Dr. Marmette, and resolved—That the notice of motion given at last meeting by Dr. N. Larue, with reference to a central examining board, be referred to the committee having charge of the proposed amendments to the Medical Act.

Moved by Drs. Ladouceur, Russell, Prévost, Mignault, Leprohon, Rinfret, Rodger, Gingras and Marmette ; seconded by Drs. Hart, Desaulniers, Parke, Geo. Ross, Durocher, Kennedy, Simard, St. George, and Rousseau :

Resolved unanimously,—That this College feels itself bound to express its opinion on the present state of the public health in this Province, in reference to the smallpox epidemic which exists in the city of Montreal and is now spreading to other parts of the Dominion ;

That it is the unanimous opinion of this College that science and experience have established incontestably that vaccination and re-vaccination is the only preventitive of such calamitous periodical visitations as at present ;

That when the disease or epidemic is fully and extensively developed, as is unhappily the case at present, concerted, unanimous and united action is absolutely necessary, and *perfect* isolation, *scientific* disinfection, with vaccination and re-vaccination, will alone stamp out the epidemic ;

That the immediate establishment of Local Boards of Health throughout the Province, organized under Chapter 38th of the Consolidated Statutes of Canada, is the proper course to prevent the spreading of the epidemic in the country parts, as well as in the cities and towns.

Moved by Dr. Durocher, seconded by Dr. N. Larue—That a copy of the report of the committee upon the proposed amend-

ments to the Medical Act be sent to each governor fifteen days before the special meeting of the Board, and that the names of Drs. Ladouceur and Lanctot be added to the committee.

In the absence of the two Vice-Presidents—Hon. Dr. Ross in Europe, and Dr. Hingston, who was detained in Montreal owing to the recent troubles in that city on the vaccination question,—Dr. Marsden of Quebec was named Vice-President *pro tem.* for the purpose of signing the licenses. The following graduates of Universities having been sworn, received their diplomas :—W. A. DeWolf Smith, Montreal ; Hilaire Goudreau, Lacolle ; Charles F. X. Prévost, St. Pierre de la Patrie, County of Compton ; Hector Palardy, Marieville ; Chas. N. Gauvreau, St. Frédéric de la Beauce ; Louis A. Gagné, Kamouraska ; Alfred Laurendeau, St. Didace ; Alfred Morin, Baie St. Paul ; Gaston G. Smith, Papineauville ; Louis F. Lepage, Rimouski ; Léon Octave Noël, Scottstown, Co. Compton ; Louis P. Picard, Quebec ; Joseph Houle, St. David d'Yamaska ; Joseph N. Legault, St. Jean Baptiste, Montreal ; Ferdinand Simard, Daniel Caisse, Lucien Proulx, Arcadius Toupin, Henry Dazé, Jabez B. Saunders, Joseph Jetté, Frank R. England, Wyatt Galt Johnston, and Hormisdas Brodeur, Montreal.

The Secretary (Dr. Belleau) drew the attention of the Board to the applications for license of Dr. Burrows of St. John, N.B., and Dr. A. M. Robertson, of the Beaver Line of steamships. Both these gentlemen are graduates of McGill University, and were admitted to the study of medicine by the Medical Council of Ontario. As it was shown that their matriculation was accepted by this Board, it was decided that the license be granted them.

Moved by Dr. Lachapelle, seconded by Dr. Rodger, that the secretary be instructed to write to the Registrar of Ontario and enquire upon what qualifications Dr. A. M. Ross was admitted to registration in that province.

Dr. Campbell suggested that a sheet containing the names of new licentiates be sent to members after each semi-annual meeting.

After a vote of thanks to the Laval University for the use of their rooms, the meeting adjourned at 4.30 p.m.

Bronzing of the Skin from Arsenic.—It is not generally recognized that when arsenic is given for a lengthened period, it produces, occasionally, bronzing of the skin. This is not due to the deposition of the metal in the cellular structures of the skin,

as is the case with the bronzing brought about by the internal administration of the nitrate of silver. During the past year we have had under treatment a case of epilepsy in a young man. Bromide of potassium in divided doses of three drachms daily causes an intense and disfiguring acne, but when combined with five minim doses of Fowler's solution, the eruption quickly disappears, to be succeeded by a marked bronzing of the skin, especially of the face, neck and hands, which in turn disappears on the discontinuance of the arsenic. Von Guaita says that arsenical bronzing is more likely to occur in children who have been taking Fowler's solution than adults. It is well known that children, especially girls, withstand the untoward influence of this drug much better in proportion to their age than do adults. From a very considerable experience of the use of arsenic in the treatment of infantile chorea, we are unable to confirm Von Guaita's assertion. Arsenical bronzing entirely disappears a few weeks after the discontinuance of the drug, and is of no significance, except the temporary disfigurement that it gives rise to.

—We have at last been told the real reason for our smallpox epidemic. The original recently appeared in a New York newspaper :—

"Mr. ——, a well known French Canadian lawyer, claims to have been studying up the smallpox question with some eminent scientists, and the conclusion they have come to is that the disease originated in Canada and has always been prevalent here, and more especially in the immediate vicinity of Montreal. When Jacques Cartier first sailed up the St. Lawrence he found Indians dying off by hundreds from the disease, and it broke out among the crews of his vessels. While they were lying at Hochelaga the mortality was so great that one of the ships had to be left behind for want of sailors to man it. Several of the sailors died on the voyage back to Europe and the disease was then spread broadcast. Smallpox, they claim, seldom attacks new-comers, and is most deadly in its effects among the families who have been settled here for the longest time. Thus the Hurons and the Iroquois Indians have been almost exterminated by the disease, and now it is the turn of the French Canadians, the next oldest settlers. The English people having only settled here at a comparatively late date will not suffer so much by it for several generations yet. Mr. —— claims that the reason for the great mortality among children is that they breathe the air nearer the ground than grown people and thus takes the exhalations from the earth into their system, and adduces as a proof the fact that scarcely a single tall man has died of the disease. A similar pecularity, he says, noticed in the Grotto des Chiens, at Rome, where a man feels no inconvenience

from the exhalations, while a dog dies at once. Smallpox, he says in conclusion, is as much indigenous to Montreal as yellow fever to New-Orleans or ague in New Jersey."

We trust no further questions will be asked as to why smallpox rages here. This body of "eminent scientists" has put the matter beyond a peradventure.

The "Medical Press of Western New York."—We have received the first number of this latest addition to American medical journalism. It is under the editorial management of Dr. Roswell Park of Buffalo, well known as one of the most enterprising surgeons of that city, and one whose contributions on surgical subjects have already made for him an extensive reputation. He is assisted by able colleagues from Buffalo, Syracuse and Rochester. *The Press* is a handsome journal, containing, in its first issue, an excellent collection of original papers, besides other matter of much interest. There is always ample scope for a high-class monthly such as this promises surely to be, and we wish it all success.

Medical Items.

How to take a Pill.—Dr. Ashwallis (*Med & Surg. Rep.*) says: Dr. Hanna's method, which I have tried with success on many patients who thought it impossible for them to swallow a pill in the ordinary way, is to place one or more pills under the tongue. I repeat, place one or more pills under the tongue, then take a mouthful of water or other liquid, and swallow (just as in the act of drinking). Invariably the "I-can't-take-a-pill" patient is astonished, and will investigate his mouth with his fingers to reassure himself that he has really swallowed the pill. The success—secret—as you wish—lies in the fact that in the act of drinking the tongue curves back upon itself; the pill, taken by the force of the current, is imperceptibly washed down the œsophagus.

Maltopepsyn.—Since the introduction of Maltopepsyn into the Dominion of Canada, its rapid and increasing demand, arising entirely through the support of the medical profession, until it now stands at the head of all remedies of its kind, proves conclusively its intrinsic merit and superiority of formula over all other digestive remedies. This is still further attested to by the signatures of nearly all the leading physicians of Canada, and the fact that it has met with the support of the profession in England, and is gaining a large sale throughout Great Britain. Maltopepsyn is invaluable as a specific for infants' troubles during the summer months, such as cholera infantum, etc.

CANADA
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Original Communications.

INNERVATION OF THE HEART OF THE SLIDER TERRAPIN (PSEUDEMYS RUGOSA).

By T. WESLEY MILLS, M.A., M.D., L.R.C.P., Eng.
Lecturer on Physiology, McGill University.

Since the days of Darwin and the evolution hypothesis, anatomical investigations have been carried on with a vigor formerly unknown, and with the idea of producing some time a harmony of conception as to the relations of the whole science, impossible except in the light of some such theory of development as that now so generally accepted by the scientific men of every land.

But so much cannot be said of physiology. The proportion is comparatively small of those having an immediate or remote interest in physiology, who see that before there can be any degree of completeness in this science there must be done for it what is rapidly being done for morphology. That physiologists should have begun their work on heart physiology, for example, with the most complex form of heart (mammalian) instead of the simplest was a mistake, which has led to an enormous waste of energy and deferred the day when we shall have that complete and harmonious explanation of the cardiac functions for which physiologists and physicians have so long been looking in vain, and the same remark applies to other departments of physiology. Odd as it may seem, physicians have been in some degree responsible for this state of things. Physiology, as a matter of fact, has attracted little attention as a science pure

and simple, apart from its applications to medicine. So long as any science is studied only with the object of furnishing results of *immediate* practical utility, just so long will it fail in accomplishing the highest ends even in this direction. The history of all science proves this. Physiologists have been almost, without exception, recruited from the ranks of medical men connected, in most instances, with medical schools; the schools and the medical profession have asked for a "practical physiology," and asked for it so loudly that the broader conception which ought to have taken deeper root, at least since Darwin's time, has had little chance. But now we begin to see a better state of things arising; a few men are pursuing investigations on physiology purely for their own sake, free from the worry incident to the endless repetition of the question, *Quid boni?* and this spirit is spreading to the more advanced and independent teachers of physiology in the larger universities of the world.

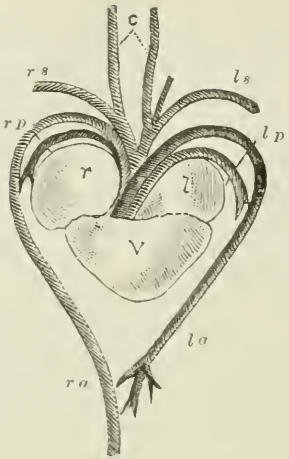
The present writer has for some time felt keenly what he has very briefly stated in this introduction. About three years ago Heidenhain in Germany and Gaskell in England began investigations on the innervation of the hearts of the cold-blooded animals, as in the natural order of things this should precede the study of the mammalian heart; while Ransom, of the same English school (Cambridge), worked out admirably the physiology of the heart of the *octopus*, a large cephalopod mollusk. Already in the light of the discoveries of workers in this field the mammalian heart is being investigated afresh, and it is safe to predict that before the lapse of another three years our notion of the innervation of the heart of man and other mammals will have been largely revolutionized, and with the result of replacing old views by others more satisfactory both to the physiologist and the physician. The explanations we have hitherto given for certain forms of heart disease seem to me too mechanical; we must introduce the nervous element more, and this conviction is founded upon my own investigations in this line of work.

For more than a year I have been engaged upon the investigation of the rhythm and innervation of the hearts of cold-blooded animals. Heidenhain's work was confined to the frog's

heart. Gaskell investigated, in addition, that of the land tortoise of England (*Testudo Græca*). McWilliam, of University College, London, has studied the heart of the eel. My own work embraces the land tortoise of America (*Pyxis*), the terrapin (living in brackish water mostly), the sea turtle, the fish, and the alligator. Of the four papers, the fruit of this work, one (terrapin) has already appeared in the *Journal of Physiology*, of Cambridge, England, and the others will probably be shortly published in that journal.

The editors of this JOURNAL, apparently sharing my views as to the scope and aims of physiology, have requested me to publish, in some form, an account of this work. This must necessarily be brief, and inasmuch as physicians are more interested in the results than the methods of investigation, in most instances the latter will not be discussed. In general terms, it may be said that the direct method of observation has been employed, and the heart has been studied *in situ*, normal conditions, as far as possible, being preserved. In the case of the fish, the heart was also studied isolated. Gaskell's and Ransom's work was done on the isolated heart in each case.

What follows may be considered as a very brief synopsis of my paper (40 pp.) on the terrapin, published in Nos. 4 and 5, Vol. VI, of the *Journal of Physiology*. Before proceeding to my own investigations proper, it may be well to remind readers that the heart of all the turtle tribe (*Chelonians*) consists of a sinus venosus, two auricles, and one ventricle. The woodcut gives at once a view of these parts and also of the vessels springing from the heart.



Heart and Arterial Trunks of a Chelonian—(after Gegenbaur).

v	Ventricle.	*l p*	Left Pulmonary.
r, l	Right and left auricles.	*r s*	Right subclavian.
r a	Right aorta.	*l s*	Left subclavian.
l a	Left aorta.	*c*	Carotids.
r p	Right pulmonary.		

The sinus and sinus extension are concealed in this view.

The structure of the heart of the land tortoise, both muscular and nervous (ganglia), has been thoroughly studied by Gaskell, and the following quotation from his paper (*Jour. of Phys.*, Vol. III, Nos. 5 and 6) will give both the site and functions of these intra-cardiac nervous structures :—

" We are led, therefore, to the conclusion that the heart contains two kinds of nerve centres—the one motor, the other trophic ; motor nerve cells of different excitabilities, the most excitable in the sinus and at the junction of the sinus with the auricles ; less excitable in the basal wall, between the auricles, and least excitable at the junction of auricles and ventricle ; trophic nerve cells which regulate the formation processes in the auricular muscle at all events, and which are distributed throughout along the course of the nerve fibres from the sinus to the ventricle. The vagus acts on both classes of nerve cells—in the one case altering the rate of the motor discharges, and, therefore, the rate of rhythm ; in the other, causing modifica-

tions in certain trophic discharges, and, therefore, affecting the force of the contraction power of conduction of a contraction wave, tonicity, etc."

We may reasonably assume that a similar distribution of nerve cells exists in the hearts of all the chelonians.

I have sufficiently examined the muscular structure of the heart to be able to compare, in a general way, Gaskell's observations. In the sinus, auricles, and, to a certain extent, in the ventricle, the muscular fibres are arranged as in the frog, but the ventricle does not consist, as in that animal, wholly of spongy muscular tissue ; its outer layers are firmer. It will be noticed that in the chelonian heart the auricles proper sit, as it were, upon a flattened part extending between the sinus and the ventricle. Now, as will be seen later, both in the chelonians and in fishes, this part of the heart is intermediate in function between the auricles proper and the sinus. It is also intermediate in microscopic structure between sinus and auricles proper. Gaskell has spoken of these parts as " bulged auricles," and " flattened " portion, and " basal " wall, including all as belonging to the auricles ; but it seems to me much better to speak simply of auricles and *sinus extension*, especially as this flattened portion, which is neither auricle nor sinus strictly, but more, in function at least, like the sinus than the auricle ; and the more so as the case for the fish is so similar, and in this animal the auricle consists plainly of a bulged part almost wholly.

The arrangement of the valves in the heart of the chelonians was long since investigated by Brücke. He showed that the contrivances were such that the purest blood was always sent to the head, though, owing to imperfections in the circulation, no part of the body received perfectly oxidized blood. The whole mechanism is admirably described and figured by Huxley in his " Vertebrates," p. 265.

I may now proceed to give the results of my own investigations proper, which were founded upon experiments on thirty-four terrapins.

Comparison of the Vagi —One of the great results of this recent physiological work has been the new light thrown on the

functions of the pneumogastrics. My examinations in 24 cases of the *relative* power of each over the terrapin's heart has led to the following conclusions. It is understood that the capacity of the vagus to arrest or otherwise modify the rhythm is referred to; "rhythm" will be used in this paper always in the sense of *rate* of beat :—

1. As a general rule, in the Slider terrapin the R. vagus has more influence over the rhythm than the L.

2. In a certain small proportion of cases the reverse holds true.

3. In a few cases the L. vagus has no effect whatever over the rhythm.

4. The L. vagus has sometimes an effect on the *force* of the beat when it has none on the rate. The length of time during which the beat can be inhibited by the R. vagus is much greater, as a general rule, than that of the L.

Unilateral Effects of Vagus Stimulation.—In a certain number of cases, stimulation of one vagus has caused effects on the corresponding side of the heart, either wholly confined to, or more marked on, that side—*e.g.*, one auricle has been more slowed, its beat more weakened, or there has been more dilation than on the opposite side.

This throws light on the cause of the greater influence, of an inhibitory kind, the R. vagus usually exerts, which will be referred to later.

Effects of Vagus Stimulation on the Sinus Venosus.—If all the rest of the heart be cut away, the sinus still continues to beat. If either vagus be stimulated, and especially the R., the sinus will be arrested; further, if it be divided into two longitudinal sections, each part may be inhibited by the stimulation of the corresponding vagus.

Effects of Section of the Vagi.—It has long been well known that, in the dog, section of one vagus sometimes, and of both vagi generally, gives rise to great cardiac acceleration. This was explained by the conception that the heart was held in to a certain rhythm by impulses descending the vagus from the inhibitory centre in the medulla. But the subject does not seem

to have been previously tested among the cold-blooded animals. As the results of my experiments in 18 cases, it may be stated that—1st, Section was followed by no cardiac acceleration in seven cases. 2nd, There was slowing (perhaps owing to mechanical stimulation of the nerve by the section) in four cases. 3rd, There was slight acceleration in three cases (*e.g.*, 26 to 28). 4th, Moderate acceleration followed in one case. 5th, Very marked acceleration in three cases.

The most decided acceleration (8 to 20) was in a case in which the previous R. had been slow and irregular. The true state of the case may be inferred from the following extract from the original paper:

"When the rhythm is fairly or very rapid, and the cardiac action regular, section of one or both vagi may be followed by no acceleration or only very slight acceleration; but if the rhythm be slow, and the heart's action very irregular, the acceleration may be considerable."

The evidence for impulses *constantly* descending the vagi and retarding the heart's rhythm or keeping it slower than it would otherwise be but for the vagi, etc., it will be seen, is not, so far as the cold-blooded animals thus far examined are concerned, very strong; but, under certain circumstances, such does seem to be the case.

The general action of the vagus and the explanation of the same will be next considered.

(*To be continued.*)

PELVIC CELLULITIS.

By B. WHITEMAN, M.D., of Shakespeare, Ont.

(*Read before the Canadian Medical Association, at Chatham, September*, 1885.)

Mr. President and Gentlemen :—Were I required to state what class of diseases had given me most trouble and anxiety in the course of my practice, I should be inclined to answer, " Inflammatory affections of the parts contained in the pelvic cavity, including cellulitis and peritonitis." It is much more frequent in the female than the male—as we would expect. We find it oftener in married than in single women, though by no means uncommon in the latter. Its causes are differently stated by different writers ; doubtless each are giving what appeared to him to be the exciting cause in the cases coming under his own observation. Its real nature is often overlooked, or set down as " womb-disease "—a term which generally satisfies the patient—that her case is serious, is well understood, and that she is to be thankful for any benefit that she may receive, or appear to receive, from treatment ; while she is to bear with all the patience she can command what has to be endured.

The causes generally given are : The puerperal state and its diseases or accidents, ill-fitting pessaries, tents, local injuries, injudicious use of caustics, also cold and fatigue. Judging from the cases that I have seen, I should say that a want of flannel underclothing was at the bottom of some of them, while overwork and a life of worry and fatigue are predisposing causes. Case II, which I shall briefly sketch, is a too common example. On another occasion it was brought on by the woman wading, during a menstrual period, through a cellar in which were about one and a-half feet of cold water. The most intractable cases with which I have had to deal were of gonorrhœal origin. And I have seen it acute and severe when no cause could be ascertained, as in Case V. In Case III it appeared to be due to erysipelas poison. As to its course, it varies greatly. Sometimes proceeding rapidly to suppuration, the abscess being evacuated by nature or art, and the patient soon recovering good health. Often terminating in subacute

inflammation, and producing marked adhesions or a chronic purulent discharge, which leave the victim an invalid for years, if not for the rest of a life-time. I shall briefly sketch a few cases, each of which is a type of its class.

Case I.—Mrs. A., aged about 35 years; had one child 11 years old. Suffered from abdominal pains and leucorrhœa, with more or less smarting pain on micturition, for the last seven years. At different times during this period had been confined to bed for a week or two at a time. I further learned from her husband that he had been away from home, and contracted gonorrhœa shortly before the commencement of her trouble. When first called, I found her in a low fever, very tender over the pelvic region, but not much more than she was accustomed to. Pulse from 115 to 130; temperature generally 102° in the morning to 104° or 105° in the evening. She continued in this state for about three weeks, during which she lost much flesh, but febrile symptoms subsided. The vaginal walls became boggy and very tender, and the uterus fixed and apparently buried in the mass of swollen cellular tissue. Owing to her weakness and the local tenderness I delayed somewhat in opening into the abscess which had evidently formed, applying warm poultices externally, with large warm vaginal irrigations, and such internal medication as her case called for, chiefly quinine with dilute mineral acids, digitalis, and opiates or chloral hydrate as required, also giving directions as to diet, fresh air, &c. At a visit in the latter part of the third week, I found that an enormous amount of matter was discharging from the vagina, the abscess having found an outlet behind the os. I continued antiseptic vaginal injections for a few days, and then, as the parts became much less tender, I found I could pass a soft catheter about nine inches behind the uterus. I enlarged the opening slightly, and succeeded in getting in a rubber drainage-tube, and through this, thoroughly washed out the cavity until the water came clear and free from smell. The drainage-tube was only required for about ten days, after which the abscess closed and my patient soon began to put on a large amount of flesh. This improvement continued for about six months, when she again began to complain of her old symptoms. I advised her to keep in bed again, and have the poultices reapplied. Vaginal tenderness was not so acute as before, and it was my intention, as soon as the abscess should point anywhere that I could reach it, to make a free opening. Four days afterwards I was summoned in haste, as she was in great pain. I hastened to her

residence, but found her dead. Her husband informed me that when he went to work that morning she did not appear worse than usual of late, but had wandered considerably through the night. About an hour after leaving the house he was sent for, and finding her suffering so severely, he at once sent for me. Her agony was intense until a few minutes before death, which occurred in about two hours from the onset of the severe pain. I concluded that the abscess had burst into the peritoneal cavity, and that the sudden death was in a great measure due to shock. An autopsy could not be obtained.

Case II.—M. Mc—, aged 24 years, single. I first saw this patient July 15th, 1884. She was suffering intense agony, apparently from acute general peritonitis. She had been very ill for about 48 hours. I afterwards learned that her trouble began shortly after sitting on the grass, on a cool evening, as menstruation was coming on, with but light clothes and cotton undergarments. On going into the house she was taken with a severe pain in the abdomen, then chills and fever, and menstruation ceased. As nothing would remain on her stomach, I gave morph. acet. gr. ss. hypodermically. This gave her little relief, as her sufferings were extreme. She could not endure the weight of the bedclothes. Pulse 140; temperature 105°. In about an hour I repeated the dose, after which she settled somewhat. This patient, for about three weeks, required half a grain of morphia hypodermically every two hours; often it had to be repeated before the two hours expired, so that she took from 12 to 14 grains of morphia hypodermically every 24 hours for the greater part of that time, and any attempt to diminish the frequency or amount of the drug was at once followed by an increase of pain. About the end of the first week the pain over the upper portion of the abdomen began to diminish, and she was able to take a very small quantity of food, but had to be fed chiefly per enema during the greater part of her illness. She did not appear to get relief from medicine given otherwise than hypodermically. At the suggestion of Dr. D. B. Fraser of Stratford, who saw her with me, I added, occasionally, $\frac{1}{60}$ gr. of atropine sulph. to each dose. This quieted the stomach somewhat, but not enough for food and medicine to be taken naturally.

August 10th.—I could make out a distinct tumor to the right of the uterus. There was not much tenderness in the vagina, except when the tumor was pressed, but moving the uterus gave pain. I applied poultices for some time, until one morning she took a severe attack of diarrhœa, which consisted chiefly of very

offensive pus. She then sank into a low fever, doubtless caused by absorption of pus from the rectum. The tumor disappeared with the diarrhœa, but the discharge continued for several weeks. At last I put a pad and compress over the abdomen, and had the rectum washed out twice daily with warm water, to which was added tr. iodine or emulsion of turpentine in starch. With this the fever disappeared, and she soon recovered.

Case III.—Mrs. R., aged about 27, was confined of her first child April 27th, 1883. Her husband was just recovering from a severe attack of erysipelas in the scalp, during which she attended him, although I had her warned of her danger in doing so. When called to the confinement, I found her well on in the second stage of labor, occupying the bed from which her husband had just arisen, and without changing even the sheets. She gave as a reason for not heeding the warning I had given her that she had not expected to be confined for two months yet. She got through the confinement nicely without any appreciable laceration (and I always examine carefully in primiparæ). I had her carefully removed to a sofa, the bedding changed, the room well aired, and clothes wrung out of hot water sprinkled with carbolic acid applied to the vulva. The uterus was well contracted, and nothing abnormal appeared when I left her. All went well, and the fears which I had expressed were getting discounted all around and even in my own mind, until, on the morning of May 1st, she attempted to rise for the purpose of urinating, when she took a severe chill, lasting about one hour. I was sent for, and found her with a rapid pulse, severe thirst, and high fever. She was very much excited, and complained of severe pain limited to a small area over the region of the left ovary. I ordered large vaginal injections of dilute carbolic acid, and on passing my finger into the os uteri after the vagina had been pretty well washed out, I found an offensive smell on withdrawing it. I then passed a No. 10 gum elastic catheter with a rubber tube attached, and filled with water, up to the fundus uteri; then using the tube as a syphon, I thoroughly irrigated that organ, using hot carbolized water. I had not, at the time, seen Emmet's work where he advocates the use of hot water to contract the capilleries, but used it on account of its greater cleansing power, and after continuing it for a time, I added cold carbolized water until I brought it to the temperature most agreeable to the patient. The object of using a large quantity of the antiseptic being to remove all that we can of the offending matter, and at the same time so thoroughly saturate what we

cannot remove with the antiseptic as to disarm and render it harmless. And I may here state that I have never seen any evil or inconvenience result to the patient from intra-uterine irrigation so employed. At this examination I could detect considerable condensation of tissue around the left ovary. The more serious symptoms subsided under treatment, but tenderness persisted and the uterus became somewhat fixed. On May 10th the tumor was quite distinct in outline from the outside, and as there was indistinct fluctuation, I concluded to pass an aspirator needle and see what was in it. I ran a small needle about 2½ inches directly towards the centre of the tumor, but got nothing. I continued poulticing for some time, and it disappeared gradually, and my patient was up doing light work and only taking an iron tonic by the first of June, since which she has enjoyed good health, though her full strength did not return for many weeks.

Case IV.—Mrs. B. This patient was an old invalid. My first treatment of her was in the fall of 1882. The history was that she was married when about 22 years of age; in a little over one year from that time she had one child, a boy, still living, and then 15 years old. About a year after the birth of her son she imagined, for about three months, that she was pregnant again. Then she was taken seriously ill with severe flooding, and was for several months confined to her bed. During this illness she "suffered many things of many physicians," who exhibited great ingenuity in contriving to differ from each other. One said she was pregnant, another that she was not; one discovered a tumor, another laughed at the idea; and one stated that she had caught the fever. However, either in consequence or in spite of all the treatment she received, she, in time, made a partial recovery. But from this time she was a great sufferer. She had severe pain on defecation. This caused her to postpone the act as long as possible, with injury to her digestion. At each menstruation her suffering was more than an ordinary labor, and added to this, she was never free from a gnawing pain and sense of weight in the pelvis. When she called on me I made an examination, and found the uterus fixed and tender, with a tumor behind it, which suggested a retroflexed fundus. In order to settle this I passed a sound, and notwithstanding that it was passed with all the tact and gentleness that I was capable of, and without any force, it gave her a good deal of pain, and brought on hemorrhage. But whilst the sound passed up properly to the fundus, the tumor still remained.

This troubled me, for I could arrive at no definite conclusion as to the nature of the growth. Had consultations, but without getting any new light, further than that it was most probably inflammatory. On the 11th April, '83, after a fright, she took ill and I was sent for. I found the whole pelvis, with its peritoneum, inflamed. The tumor was buried almost out of reach by the indurated and swollen cellular tissue. She sank into a low fever, with delirium, lasting through the months of April and May, during which a large gathering formed and emptied through the bowels. Her condition was so bad that there were four weeks of this time of which subsequently she had no recollection. I was in hopes that the tumor would slough away, but with the subsidence of the swelling the old enemy reappeared ; and when she began to get up, the same old gnawing pain troubled her.

About the first of October she came with her husband to my office, stating that she wanted the tumor removed. I explained to her the dangers of an operation, especially in her weakly condition, also stating that what caused me to hesitate most was my ignorance of the nature of the growth. Her reply was that she would be satisfied with the result, and that she would prefer that I should operate to any one else. I then explained that I would cut into the tumor, and if I could not safely remove it, I would retreat with as little damage as possible, after getting all the information I could. Dr. Rankin of Tavistock was engaged to assist. When the patient was under the anæsthetic, he remarked that it was not a very promising operation, a suggestion in which I fully concurred. I proceeded to operate with the patient in lithotomy position, keeping a finger in the rectum so as to avoid wounding it. As I cut through the mucous membrane, I got at the body of the lump, which felt like muscular fibres, easily separated by the finger or handle of the scalpel. Using the latter, with a finger still in the rectum, I came upon something hard ; then taking a finger of the right hand I passed it through the opening I had made into a large open space, which we soon found was filled with fœtal bones. These I removed with a good deal of care, and found them to consist of spinal bones and some of the scalp. After washing out the vagina with a syringe, the patient was removed to bed still under the anæsthetic. When she awoke, and recognized her husband, her first remark was that the pain was away now. The medicinal treatment from this time consisted of quinine, mineral acids, and iron ; very little quinine was required. For local treatment, I had her placed on a fracture bed, so that by raising it and placing a pail under

her I could thoroughly irrigate the wound every day. This I did by passing the nozzle of a fountain syringe into the wound and thoroughly irrigating with tr. iodine or carbolic acid diluted. Here I found something that I have not seen mentioned by any writer. When I first went to irrigate the wound, I found that the water did not return, and she stated that it was going into her bowel. I withdrew the instrument, fearing very much that in spite of all my care I had opened the rectum, but the water would not come out. Then passing a tube into the rectum, it ran out freely. I now injected the rectum as full as it could hold, but not a drop came from the vagina, and the water was retained until she passed it. From this I concluded that a valvular opening had existed previously between the cyst where the bones were and the rectum, and that there had been a chronic abscess here discharging pus into the rectum, but excluding the fæces from its cavity. For a week or two, after each washing of the wound, she would have a discharge from the bowels, but this gradually ceased, and all healed perfectly, the patient making a good recovery, without, I am happy to say, any fistula resulting. In this case, the cause of the abscess was doubtless an extra-uterine gestation, in which, during the long period of her illness, the greater portion of the fœtus was removed by suppuration. I might mention that the operation was performed on the 11th October; my last visit was on the 6th November, thus terminating an illness of nearly 14 years' duration, since which she has enjoyed good health.

Case V.—Mrs. M., aged 51; menstruated until about three months ago. I was called to this patient November 27th, '84, and found her suffering from severe general peritonitis. I gave gr. ss. morph. acet. hypodermically, and remained for awhile to see the result. She was very weakly, not being a strong woman before. This gave some relief, so I left a number gr. ss. powders, directing one to be given in wafer paper every two hours until relieved, when she should have one every four hours while awake, and if sleeping, not to awaken her. Further, should she vomit the powders, to send me word; and in any case I would see her the next day. Next day I found her easier, but pulse rapid and compressible, with temperature 104.5°. I added gr. ss. digitalis with gr. iii quinine, to be given with each powder. I notified the family that she was in a dangerous condition, and intimated that should they want further advice I should be pleased to meet any regular practitioner they might select. She continued very ill, requiring gr. ss. morph. every two or three hours

for the greater part of the first three weeks. About the end of the second week I began to find the pain most severe in the left inguinal region, but could not yet make any further examination. Gradually the pain diminished in other parts, but continued in this until the end of the third week. I could make out a large tumor, which came down to the left of the uterus, and was very painful on any attempt to move that organ. She could not endure the weight of a poultice, so I kept on cloths wrung out of hot water. This patient suffered much from blood poisoning, her pulse being seldom under 120, often 140 ; temperature 102 to 104. The abscess burst into the rectum, the matter was expelled with the fæces, and the tumor disappeared four different times, each time only to fill up again, with a return of all the old symptoms. She began spitting a frothy mucus in large quantities, which troubled her a great deal. About the end of May '85, when the abscess had filled for the fifth time, I began to fear that this process must soon wear my patient out, so I ran a small aspirator needle into the tumor and removed about ℥ ss. of intensely fætid pus. I withdrew the needle rapidly, and held my finger over the spot for a few minutes, so as not to allow any of the pus to escape between the coverings of the tumor, as they did not appear to be adherent. I concluded to leave her for a couple of days, and then make an opening into the abscess. This I did on April 3rd, '85, in the following manner : After satisfying myself as well as I could that there was not a coil of intestine over the abscess, I made a slight cut through the integument at the point where I had inserted the aspirator needle, then taking a large-sized trocar and canula, I drove it right to the centre of the tumor. This was pretty painful, but it only lasted a moment. Then withdrawing the trocar, I left the canula in the abscess, and after thoroughly washing out the abscess with dilute tr. iodine, I covered the whole with antiseptic marine lint, applying a binder to keep it in position. The canula I left in for 48 hours, so as to set up adhesive inflammation of the coverings of the abscess. When removed, I put in a decalcified bone drainage-tube, directing a fresh one after each washing. At the opening of the abscess, there came out about one pint of pus so offensive that I had to leave the room as soon as I could get out, but after the first washing it was never so offensive again. This soon terminated the trouble, so that my last visit was made May 5th, since which time she is able to come to my office. She is now in fair health, taking no medicine except a tonic occasionally.

Treatment.—With regard to treatment, I will be brief. First,

in chronic cases, treat as far as possible without opiates. Instruct the patient to avoid fatigue and anxiety; have fresh air as much as possible without exertion. Keep the digestive organs and kidneys in the best possible order. Most cases are benefited by large, pretty warm vaginal injections. In acute cases, on the other hand, opiates should be given, either by the mouth or hypodermically, so as to relieve pain and quiet the patient. Quinine should be given in doses of from five to ten grains, at intervals, making about twenty grains per day, until the temperature reaches 102°F. or under. I generally, where the stomach will bear it, have powders made consisting of one grain each of opium, quinine and digitalis; of these I order one every three hours, in wafer paper, while the patient is awake, adding ten grains of quinine to the powder once or twice in the 24 hours, with such additional quantity of opium as the comfort of the patient requires. With regard to the use of aconite and veratrum viride in this disease, I have never used either drug, nor have I seen any indication for their use. As the tendency of the disease is to asthenia, and it is, above all things, necessary to support and sustain the patient through the low hectic fever that accompanies it, I only know of one thing to be said in their favor, and that is, the more frequent opportunities that those who use them have for observing the pathological changes produced by the disease. In puerperal cases, it is nearly always, if not always, produced by septicæmia, and the first and most important part of the treatment is to cut off the supply of septic material. This can be done by large and frequent vaginal or intra-uterine irrigations with antiseptic fluid. Stimulants are often required. I mostly give them in the form of egg-nogg, when the stomach will retain it. Warm poultices over the abdomen are generally comforting to the patient, if not too heavy, and while they are likely to hasten resolution or suppuration, I see no objection to their use. Formerly, if I saw the patient at the outset, and the fever was of a sthenic type, I applied cold compresses to the abdomen with good results. The bowels should be kept open by rectal injections—warm water in as large quantities as can be borne answers very well; but if

there be much tympanites, an injection containing half an ounce of turpentine and eight ounces of castor oil made into an emulsion with starch, and retained while the patient can bear it, has given me good satisfaction. Where vomiting is troublesome, I give quinine, food, etc., per rectum. I always treat these patients where the peritonitis is severe on a fracture bed. The irrigation of the parts and injections can be better carried out, and there is less disturbance to the patient in attending to the calls of nature.

QUARTERLY RETROSPECT OF SURGERY.

By FRANCIS J. SHEPHERD, M.D., C.M., M.R.C.S, Eng.,
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Surgery of the Intestines.—Although I have, in several of my recent Retrospects, devoted considerable space to the surgery of the intestines, yet I feel compelled, by the immense quantity of new information which is constantly presenting itself in this comparatively new department of surgery, to again treat of it at some length. We are still in the dark on many points, and much work is yet necessary before the surgeon can determine the best mode of treatment in the many accidents, diseases and injuries to which the intestines are subject.

Laparotomy in Cases of Perforative Peritonitis.—Prof. M. Oberst of Halle, in a paper on a case of perforative peritonitis treated by laparotomy (*Centralblatt für Chirurg.*, No. 20, '85), states, with regard to the operative treatment of acute septic peritonitis, that a favorable result from incision, antiseptic drainage, and cleansing can be expected only in cases in which either the infective focus has been localized through adhesive inflammation and a more or less circumscribed abscess has been formed, or, when with diffuse peritonitis operative treatment has been applied early, and before the formation of extensive adhesions between the various coils of intestines. In most cases, however, of acute septic peritonitis, it is difficult to make out whether the inflammation be diffused or circumscribed. In the latter case there would be a risk, in the performance of laparotomy, of

breaking down the adhesions by which the infective material is confined. In acute peritonitis due to intestinal perforation, the diagnosis is not, as a rule, attended with any special difficulty. Acute peritonitis sets in with unmistakeable symptoms, and experience teaches that with expectant treatment death almost invariably ensues as a result of diffused inflammation of serous membrane. It is thought that by performing an early laparotomy in cases of this kind, and by washing out the peritoneal cavity and closing the wound in the intestine, many a life might be saved that otherwise would be doomed. Prof. Oberst has recorded a case, in which he operated, which commenced by strangulation of an old scrotal hernia. The patient was admitted into hospital on the fourth day, much collapsed and presenting symptoms of intense peritonitis. Herniotomy was at once performed, when it was found that the sac contained no intestine, but was distended with turbid and fætid fluid. The abdomen was then opened, and a considerable quantity of fætid fluid escaped ; the intestines were found much distended and covered by a deposit of recent lymph which glued the coils together. After a long search a small orifice, from which exuded fæcal fluid, was found in a loop of intestine deeply secluded in the abdominal cavity. The intestine was completely divided at the seat of lesion, and the two ends fixed by sutures to the margin of the external wound to form an artificial anus. The cavity was washed out with a warm solution of salicylic acid, and the inflammatory lymph was scraped off from the intestines. Several drainage-tubes were introduced, and the wound closed by sutures. The patient recovered rapidly from the collapse, and did well for two weeks ; afterwards he became weak, and died on the ninth week, the fatal result being hastened by a hypostatic pneumonia.—(*Lond. Med. Record*, Aug. 15, 1885.)

Milculicz's successful case of laparotomy for perforation has already been noticed in the Retrospect for June.

The Operative Treatment of Intestinal Obstruction.—At the recent meeting of the British Medical Association, a discussion was held on the above subject. (*Brit. Med. Jour.*, Aug. 24, '85.) Mr. F. Treves opened the discussion by a paper, in which he

said that the operative treatment of intestinal obstruction might be classed under three heads: 1, The treatment of acute obstruction. 2, The treatment of chronic obstruction. 3, The treatment of chronic cases that have become acute. He, however, limited his paper to a consideration of the acute form, and ascribed the symptoms to three anatomical conditions: 1, To a hernia—like strangulation of the bowel; 2, To volvulus of the sigmoid flexure; 3, To acute invagination.

Under *Hernia—like strangulation of the bowel*, Mr. Treves places strangulation by peritoneal bands of all kinds; strangulation by omental ligaments or cords; strangulation by Meckel's diverticulum or by an adherent appendix or Fallopian tube; and lastly, strangulation through slits and apertures. Under the last head is classed internal herniæ. The treatment he proposes is as follows: The patient should be put to bed and kept absolutely at rest. No food should be given, and thirst should be relieved by sucking ice or sipping hot tea. The intestines should be kept perfectly at rest by hypodermic injections of morphia, and hot applications may be used over the abdomen. The colon should be emptied by enemata, and when once the bowel is stilled by opium, thirst may be relieved by copious enemata of hot water without increasing the intestinal disturbance. The next step should be an attempt at relief of the obstruction by laparotomy. Mr. Treves advises that laparotomy be performed within twenty-four hours when possible, provided, of course, the diagnosis is clear, for the course of the malady is rapid, its average duration six days, and its termination is fatal. The surgeon's attention should be directed to the speedy relief of the dying intestine. Mr. Treves, although he thinks spontaneous cure is not impossible, says he has been unable to find any recorded case or museum specimen that affords an instance of it. He says laparotomy, in itself, is not a serious undertaking, and the high mortality of the operation is due to it being undertaken at too late a period. The same rule, he says, should be carried out in these cases as is strangulated hernia where taxis has failed. He condemns massage and the use of the aspirator as entirely empirical proceedings. With regard to the operation, he advocates an

incision in the median line, below the umbilicus, large enough to admit the entire hand at once. The operation should be done under the spray, with strict Listerian precautions. The intestines should be prevented from protruding by flat warm sponges. The cæcum should be first examined, and if it be found flaccid and empty, it may be assumed the obstruction is in the small intestines. The right iliac region should then be examined, and if the affected loop be not readily found, the collapsed coils below the obstruction should be searched for. These are generally found hanging in the pelvis ; by passing them through the fingers the constriction can be reached without loss of time. The author strongly objects to the practice of allowing intestinal loops to protrude and then examining them in detail. He advises the placing a large warm carbolized sponge deep in the pelvic cavity, it saves much manipulation of the pelvic viscera and intestines by sponging. Should the bowels protrude, he thinks puncture should not be resorted to. When the obstruction has been found, small bands may be torn across and large ones divided between catgut ligatures. An appendix or diverticulum may be excised, and the bowel closed by Lembert's suture, so as to bring the serous surfaces in contact. If the bowel be of good color, it should be returned ; but if gangrenous, should be excised, and an artificial anus established. He condemns the immediate suture of the divided bowel for several reasons : it prolongs the operation, and it does not relieve the obstruction and distension completely. Again, it is difficult to define the limits of the gangrenous action, and, lastly, there is great mechanical difficulty in uniting a large distended bowel above with a shrunken, collapsed segment below. The abdominal wound should be closed in the usual way, and unless there is peritonitis no drainage-tubes are required. If there be peritonitis, the abdominal cavity should be washed out with a weak carbolized solution of a temperature of 98°F., and the sac should be drained. He condemns the after use of a supporting bandage as unnecessary, and likely to perpetuate the very condition it seeks to avoid.

In *acute volvulus of the sigmoid flexure*, the treatment should be rest and starvation ; opium should be given and the rectum

emptied by enemata. These cases are not so hopeful as the foregoing. Laparotomy should be performed in the middle line, the gut punctured by a capillary trocar, and reduction attempted; if this fail, then the gut should be evacuated in the summit of the flexure and an artificial anus established.

In *acute intussusception*, if no benefit follows the treatment by opium, belladonna, starvation and rest in twelve hours, it will be expedient to attempt reduction by means of insufflation or forcible enemata; if this fails, laparotomy should be resorted to and the invagination reduced if possible, if not, the bowel should be resected and an artificial anus established.

Mr. J. Greig Smith, F.R.C.S. (Bristol), also read a paper on *The Operative Treatment of Acute Intestinal Obstruction*, which is published in the same number of the *British Medical Journal*. He agreed with the general principles which ought to guide us in the operative treatment of intestinal obstruction as laid down by Mr. Treves, but differed from him in two points of operative procedure. (1), As to the method of finding the cause of the obstruction, he considers that the best guide to the seat of obstruction is not manual exploration, but visual examination, assisted, if necessary, by extrusion of the bowel. (2), As to the treatment of the bowel after the obstructing cause has been removed. He is strongly of opinion that no case of operation for intestinal obstruction is properly concluded until the over-distended bowels are relieved of their contents. He would, in searching for the obstruction, in the first instance, ignore the cæcum, substitute the finger for the hand, and supplement both by sight. He would permit the bowel to extrude, and if this were any help to finding the obstruction, would encourage it to do so; he would do all this before he inserted his hand to grope for the cause. Mr. Smith considers the condemnation of extrusion of the gut in these cases as a remnant of the pre-abdominal era of surgery, when exposure of the peritoneum and extrusion of the gut was considered to be almost certain death. If, when extruded, the bowel be protected by warm carbolized sponges, it will come to no harm. He considers the search for the points of obstruction in an abdomen filled with distended intestines one

of the most difficult undertakings in surgery. On opening the abdomen, the presenting bowel should be keenly observed, and as the most dilated portion of the bowel rises to the surface there is a strong chance of its being near the abdominal opening, move the bowels up and down, to the right and to the left, and fix upon the most dilated and congested portion. Using this portion as a guide, and running the forefinger along one side of the mesentery, the seat of the obstruction will probably be met with ; if the distended bowel is with difficulty kept in the abdomen, let it escape, as its escape will help us to find the cause of obstruction. With regard to the second objection, Mr. Greig Smith holds that the presence of an excess of intestinal contents is in itself a cause of obstruction, and mere drainage of the intestinal contents should be frequently successful in saving life, although the obstruction may not have been overcome. If drainage can be accomplished by incision and immediate suturing, all the better ; if not, Mr. Smith thinks it our duty to establish for a short time an artificial anus.

Mr. Mayo Robson, F.R.C.S., read a paper at the same meeting on *The Treatment of Intestinal Obstruction* (*Brit. Med. Jour.*, Aug. 29, 1885). He said that in regard to intestinal obstruction exact diagnosis is often impossible. He divides cases as follows : (*a*) Cases of obstruction as a rule chronic, the obstruction being the prominent symptom, acute troubles only coming on at a later period ; (*b*) Acute cases, which may be roughly divided into three classes : (1) those of internal strangulation, as intussusception, volvulus, bands, etc. ; (2) enteritis or other cases of purely functional obstruction ; (3) perforation attended with acute peritonitis. Mr. Robson went on to say that the post-mortem records of our large hospitals show us that in many cases surgical interference might have failed, whilst in others a timely laparotomy would have proved beneficial. The following conclusions are based on Mr. Robson's own experience, on post-mortem records, on recorded cases, and on cases which he mentions in his paper :

1. In chronic cases—that is, where obstruction is a prominent symptom—medical treatment, such as injection, belladonna, mas-

sage, galvanism, etc., will often relieve or cure ; or colotomy or laparotomy, or some other operation, will be so plainly indicated as to leave no doubt as to what should be done.

2. In acute symptoms supervening on chronic, medical treatment—*e.g.*, starvation, rest, opium—may still often bring about a cure ; but laparotomy, as a means of diagnosis and possibly of treatment, may be demanded.

3. In initially acute cases, delay is often as dangerous as it would be to wait for an external hernia to reduce itself by its own efforts. Laparotomy should be performed early (*a*) as a means of making a diagnosis ; (*b*) as removing the cause of strangulation, if such be discovered ; (*c*) as a means of giving relief, if no cause can be found, by opening the bowel above the point of obstruction and carefully suturing it to the surface.

These three papers are well worth reading in the original. I have merely given as full a synopsis as I had space for. With regard to the operation, surgeons are now convinced that it ought to be performed early, if only for purposes of diagnosis. As a rule, these cases are handed over to the surgeon by the attending physician at too late a period, simply because the diagnosis was not accurately made out and the fear that a useless operation would bring discredit on the medical attendants. The diagnosis is impossible to make in many cases, and difficult in all. It is very easy on paper to put the causes of acute obstruction under different heads and give the treatment of each, but in actual practice it is difficult to make out more than that there is obstruction with or without peritonitis. I have seen several post-mortems where death has occurred with symptoms of acute obstruction which had been caused by peritonitis ; others where the symptoms were not urgent till a few hours before death, and where operative interference would have been of no avail ; others, again, where the disease was chronic, though latent, and acute symptoms rapidly developed. The profession is not yet educated up to early operative interference, but the time is rapidly approaching when laparotomy will be undertaken for intestinal obstruction as readily as tracheotomy is for laryngeal diphtheria. The danger of the operation *per se* is not great,

and soon will be performed as a means of diagnosis in most cases and permanent relief in many. In obscure abdominal cases, it is better, as, I think, Mr. Lawson Tait has remarked, to "get inside and find out."

In the same number of the *British Medical Journal* is a paper by Mr. R. N. Pughe on a successful case of abdominal section for *Intestinal Obstruction caused by the Vermiform Appendix.* In this case the congested and distended bowel was easily found, and the constricting band, which was found to be an abnormal appendix, ligatured in two places and divided. The recovery was uninterrupted.

In the same journal is an interesting paper on *Enteroraphy, with a description of a new form of suture*, by E. S. Bishop, F.R.C.S. I have space merely to mention this paper for reference.

Mr. Mayo Robson also reports a case of *Enterectomy for Acute Intussusception* in the *Brit. Med. Jour.* for October 3rd. More than four feet of bowel was removed. The patient only lived a few hours, dying apparently from shock.

Dr. Joseph B. Heald (*Boston Med. & Surg. Journal*, Sept. 3rd, 1885,) reports a successful case of *Laparotomy for Intestinal Obstruction from Intussusception*, in a man 25 years old, operated on by Dr. John C. Irish. The symptoms had lasted three days, and were attributed to a fall. The abdomen was opened in the median line, but nothing could be learned by inspection, owing to extreme distension of intestines, so about 15 feet of the gut were carefully drawn out, when some resistance being felt, the hand was introduced and a piece of invaginated gut drawn out. The invagination was relieved and the extended intestines replaced without difficulty ; as soon as the obstruction was relieved, the patient passed per rectum a quantity of thin fæces and a large amount of gas. During the manipulation of the intestines, and after, there was profound shock, but the patient rapidly recovered without a bad symptom, and was sitting up on the fourteenth day.

Laparotomy as an Aid to Herniotomy.—E. Hury Fenwick, F.R.C.S. (*Lancet*, Sept. 26, 1885), reports a case of left inguinal hernia which had become strangulated, and taxis failing, herni-

otomy was performed, but he failed to reduce the bowel, even after opening the sac. He then made a two-inch median incision into the abdomen, above the pubis, introduced the finger into the peritoneal cavity, and pulled back the extruded gut with ease. The patient, after several days, gradually sank and died. No explanation of the cause of death could be made out at the autopsy. The abdominal incision appeared to have no share in the fatal result.

Colotomy with delayed opening of the Intestine.—Mr. Davies Colley (*Lancet*, March 21, '85), at a meeting of the Clinical Society of London, read a paper on the above subject, based on three successful cases of left lumbar colotomy, in which the opening of the intestines had been delayed for one, four, and six days respectively. The object in dividing the operation into two stages was to allow the wound to heal before risk of contamination by bowel contents, and so prevent peritonitis, suppuration, etc. To prevent the protrusion of the bowel, Mr. Davies-Colley uses a clamp devised by himself.

Dr. Charles B. Kelsey, in an article on the *Limitations of Colotomy in Diseases of the Rectum* (*American Journal of the Med. Sciences*, Oct., '85), concludes a valuable and interesting paper by giving the following indications for colotomy:

1. In congenital malformations of the rectum or anus in children, in which a tentative operation in the perineum has failed to reach the rectal pouch.

2. In intestino-vesical fistulæ.

3. In tumors occluding the rectum, which cannot be relieved by any other means—as dilatation, division, hot water, or electrolysis.

4. In non-cancerous, simple, or specific stricture and ulceration of the rectum (with or without fistulæ), where the disease cannot be relieved by proctotomy or dilatation.

5. In cancer, where the disease can neither be removed nor the passage re-established, and where death is probable from obstruction,—except in cases where the immediate dangers of the operation more than counterbalance any good likely to be derived from it.

6. In volvulus or intussusception of the colon or sigmoid flexure, where reduction by aid of laparotomy has been found impossible.

Hip-Joint Disease and its Early Treatment.—Mr. John Croft (*Lancet*, June 6th, 1885), in a paper on the above subject, after having briefly commented on the four allied subjects of (1) the often tubercular nature of this chronic disease, (2) the frequency of the occurrence of necrosis and sequestra in the later stages of it, (3) the less frequent, but not uncommon, result of shortening of the limb found in cases of the first stage of the disease, and (4) the too much overlooked symptoms of reflex muscular spasm and rigidity, went on to speak of the early treatment. This consists in absolute physiological rest, which is ensured by recumbent posture, a long, suitable splint, and a certain amount of extension or traction on the limb. Weight only sufficient to steady the limb should be employed. He is not in favor of local applications, as irritants, setons, issues and the like. Leeching he has found useful in relieving acute sensitiveness and pain in acute attacks of inflammation. Poultices and soothing fomentations are occasionally useful, but their habitual use is not desirable. The whole limb should be kept warm and scrupulously clean by washing, and it should be systematically rubbed to maintain the suppleness of the muscles and joints below the hip.

The splint employed by Mr. Croft is a modification of Thomas's back splint. He prefers the parallel outside splints six inches longer than the limb, with a chest girdle. A stirrup is applied to the foot and leg, and this stirrup is fixed to the end of the splint by a strong elastic band or cord. Counter extension is provided for by the pelvic girdle, to which the ends of a perineal band are attached.

Excision of the Hip.—Dr. Wm. Alexander of Liverpool, at the close of an interesting paper on excision of the hip, summarises as follows:

1. That hip disease should, in the earlier stages, be treated by that absolute and perfect rest obtained by means of Thomas's splint.

2. That this treatment, thoroughly and persistently carried out for a long period, will cure a large percentage of joint diseases.

3. Unfortunately, this treatment cannot and is not persistently carried out amongst the poor. . . .

4. Many of these patients could be saved by excising the joint when a decided second stage of hip disease had been reached. Excision is best performed by severing the femur above the trochanter, clearing out the acetabulum, and maintaining the opposing bones so far apart that their surfaces can resume a healthy condition and the aperture be filled up with fibrous tissue. By this means an excellent false joint is formed, or, if the adhesions become too firm, a good stiff joint.

5. That the advent of the stage of this disease suitable for excision is indicated by repeated formations of abscesses around the joints. . . . .

6. That when the supra-trochanteric mode of excision cannot be performed with any chance of success, then the alternative is either continued expectancy or amputation.

7. That it is a great mistake to imagine that all softened bone or infiltrated tissue should be cleared away by the operator. All he has got to do is to clear a space, where the operations of nature, in dealing with diseased or disabled tissues, can be carried out as easily and expeditious as possible. The operator should remove all manifestly dead tissue, but the doubtful should be left alone to be dealt with by nature.—(*Liverpool Medico-Chirurgical Journal*, July 1885, quoted in *Medical News*, 22nd August, 1885.)

Spina Bifida.—The report of the committee on spina bifida was presented to the Clinical Society of London by Mr. R. W. Parker. The following portion treats of the *Clinical course and Treatment of Spina Bifida.* (*Lancet*, May 30th, 1885.) As regarded the natural history of the deformity, the Registrar-General's report for 1882 showed 649 deaths from spina bifida, of which 612 died under one year old. The committee held that, though a certain number of these deaths were due to local causes, rupture of the sac, draining away of the cerebro-spinal fluid, and subsequent septic meningitis, yet in a large proportion of cases

death ensued from the marasmus and general defective nutrition so frequently associated with the deformity, and which could not be remedied by local or other treatment. The tables next dealt with the treatment by injection with simple solutions of iodine, and showed a considerable amount of success. Then ligature of the sac was considered, and here, again, good results were obtained. Excision likewise had a considerable proportion of success. The plan of repeated tapping and pressure gave the least successful results of any. The injection of Morton's fluid showed a percentage success of between 50 and 60. The high mortality was thought to be due largely to the treatment having been adopted in unsuitable cases on account of its simplicity and supposed safety. In spite of the favorable results of ligature and excision of the tumor, as shown in the tables, the committee felt themselves compelled to report against these methods of treatment. There was reason to think that the reported cases might be misleading, owing to some cases of failure not being reported, while all the successes being regarded as surgical triumphs were almost certain to have been recorded. Moreover, it seemed probable that a careful selection of cases had been made. The committee, therefore, advocated the plan of treatment by injection of Morton's fluid.

[Dr. J. Morton's fluid is made by dissolving 10 grs. of iodine and 30 grs. of iodide of potassium in one ounce of glycerine. Half a drachm is injected after the withdrawal of a small quantity of the spinal fluid.]

Treatment of Cephalocele and Spina Bifida.—Prof. Schatz of Rostock, in a paper in the *Berlin Klin. Wochensch.*, No. 28, 1885, and quoted in *Medical Times*, says that of 105 cases of cephalocele, 59 were occipital and 46 frontal in position. Of the former, 24 were left untreated and only 3 recovered; 35 were operated upon by incision, injection of iodine, or ligature, with six recoveries. Of the frontal encephaloceles, 6 out of 32 survived without treatment, and only 3 out of 14 after operation. Prof. Lorimer is quoted as stating that no operative interference should be attempted when it can be clearly shown that a communication exists between the sac and the vertebral canal. Prof.

Schatz considers the operation only justifiable when there is no such communication, and when the tumor is covered with healthy skin, is fully transparent, and not painful. In other cases, he would endeavor to secure isolation of the tumor from the arachnoid cavity by means of graduated constriction or pressure calculated to set up a process of plastic adhesion, when applied to the base or pedicle (if there be one) of the tumor. He relates particulars of three cases in which he operated by emptying and removing the sac, the base or pedicle of which was firmly secured by means of a long clamp. All the cases were severe. Two recovered and one, a case of spina bifida, died. Compression of the sac by clamps may be found of use in those cases where there is a pedicle and the case is a simple one.

Wrist Ganglion.—Dr. R. Falkson (*Archiv für Klin Chir.*, Bd. 32, Hft. I, 1885) gives 15 cases of total extirpation of wrist ganglions. Removed with antiseptic precautions, perfect preservation of function was secured, and primary union took place in all but two cases. These ganglia often dip under the carpal ligament, and in 13 of Dr. Falkson's cases extended to the joint capsule, but did not communicate with the joint. Volar ganglia always occur on the radial side, and in extirpating them it is sometimes necessary to tie the radial.—(*Quoted in Annals of Surgery*, Oct. 1885.)

Palmar Ganglion.—The treatment of palmar ganglion has never been very satisfactory. It is an affection which interferes considerably with the function of the hand, and at times renders it completely useless. The old forms of treatment by pressure, counter irritation and tapping, though occasionally successful, cannot be relied on. Injections and incision of the sac have been frequently followed by failure, and occasionally by fatal septicæmia. Again, if there is free suppuration, the tendons become adherent and the hand is rendered useless. These ganglia nearly always contain "melon-seed bodies"; when these are present injection is useless. In an interesting editorial in the *Lancet* for June 27th, 1885, the writer advises early operation, free evacuation of the cyst, and removal of the "melon-seed bodies." For this purpose a free incision is necessary over

the most prominent part of the swelling, above the annular ligament; pressure should be made in the palm to force out the fluid and as many of the loose bodies as will escape; then a sharp spoon should be introduced, and the whole cavity scraped to detach any "bodies" which are fixed to the synovial membrane. This is better than attempting to wash out these bodies or trying to remove them, as Volkmann does, by passing in a drainage-tube and drawing it sharply to and fro. After having scraped out the sac, a solution of zinc chloride, 40 grs. to the ounce, is applied to the whole interior of the sac to modify the nutrition of the lining and prevent a re-collection of fluid. The operation should be done with strict antiseptic precautions, as by this means union by first intention is obtained, and there is no danger of septic suppuration. A tube should be introduced, not made to come out in the palm, as suggested by some surgeons; this is unnecessary, as perfect drainage may be obtained by fixing the hand in a splint and placing a compress on the palm. How the cure is effected is not clearly understood—granulation or direct adhesion, or is it analogous to the cure of hydrocele by injection? if so, it has no tendency to recur, as hydrocele has.

Transplantation of large pieces of Skin in recent Wounds.—Esmarch brought forward, at the German Congress of Surgeons, some pictures to illustrate the importance of such treatment. One was a case of lupus of the nose; another, a facial mole. The success in both cases was complete; the flaps united by first intention, and the scar was quite insignificant. The conditions necessary for success are that all subcutaneous tissues should be cut away and the flaps laid flat on the raw surface, where they should be firmly secured by a few stitches and a bandage.—(*Verhand. der Deutschen Gesell. f. Chir.*, quoted in *Practitioner*, October, 1885.)

There is an elaborate article in Langenbeck's *Archiv f. Chir.*, Bd. 130, Hft. III, 1884, by Dr. H. Maas of Würzburg, on the healing of large raw surfaces by the application of large skin flaps from distant parts of the body. For instance, suppose there was a large raw surface on one leg; a piece of skin is partially dissected from tne other, placed over the raw surface,

and kept there by sutures, and the two legs would be immovably fixed upon one another by plaster bandages. When the flap has taken, it is cut away from the sound leg and allowed to receive its nourishment entirely from its new attachment. I saw at the New York Hospital, eighteen months ago, the whole back of the hand covered in this way by a flap from the chest. The surgeon was Dr. W. T. Bull.

Treatment of Ringworm by Chrysarobin.—Dr. Alexander (*Jour. of Cutaneous and Venereal Diseases*, Vol. III, No. 2) found the most satisfactory results follow in ringworm when a paint of chrysophanic acid was used. The preparation is made by adding one part of chrysophanic acid to ten of liquor guttaperchæ, and is used as follows: The hair of the head is closely cut or shaven, the scalp thoroughly cleansed, and epilation by forceps of diseased hairs on the spots. The pigment should now be applied to the diseased spots with a stout brush. Nothing more is done till the growing hairs push their way through the paint, when the application is renewed. This is done about once or twice a week. In many of the cases thus treated, even without epilation, the disease was cured by one or two applications.

Treatment of Nævus by Ethylate of Sodium.—Mr. S. Welch (*Brit. Med. Jour.*, Aug. 1885) says that he finds ethylate of sodium very efficacious in the treatment of nævus. Two coatings of the ethylate are painted over the nævus on two consecutive days, care being taken to protect the surrounding skin. In all instances of superficial nævi, this treatment is completely successful. When the nævus affects the subcutaneous tissues, a second and even a third application of the remedy is required.

The Way to Prepare Sponges.—The following is Mr. Lawson Tait's method of preparing sponges, and but one person is entrusted to do this: New sponges are first put into a large quantity of water, with sufficient muriatic acid to make the water taste disagreeably acid. They remain in this mixture until all effervescence has ceased, and all the chalky matter is removed. For this purpose it may be necessary to renew the acid several times. The sponges are afterwards carefully and thoroughly washed to free them from every rough particle. After being

used at an operation, they are first washed free of blood and then put into a deep jar and covered with soda and water (one pound of soda to twelve sponges.) They are left in this about twenty-four hours, and then they are washed perfectly free from every trace of soda. This takes several hours' hard work, using hot water, squeezing the sponges in and out of the water, and changing the water constantly ; allowing them to soak for a few hours in very hot water greatly assists in the cleansing. When quite clean, they are put in a jar of fresh water containing about 1 per cent. of carbolic acid, and after being in this for 24 hours, are squeezed quite dry and tied up in a white cotton bag, in which they are left hanging from the kitchen ceiling (being the dryest place in the house) till they are wanted.—(*Amer. Jour. of Obstet.*, quoted in *Pacific Med. & Surg. Jour.*, Oct. 1885.)

Bichloride of Mercury as an Antiseptic.—According to Prof. J. Mikulicz (*Archiv f. Klin. Chir.*, 1884), for the prophylactic portion of wound-antisepsis—disinfection of sponges, tubes, sutures, operator's hands, and the part to be operated on—sublimate is incomparable, its value being increased by the rapidity of its action. It is not, however, suitable for metal instruments, since they are attacked by it. During and after completion of an operation, on the other hand, we have to deal with albuminous secretions, which form insoluble combinations with mercury, and for this the sublimate does not answer so well as carbolic acid. Mikulicz found that solutions of 1–1000 retarded and diminished the development of micro-organisms ; weaker solutions not perceptibly, while only a strength of 1–400 or 500 completely prevented their appearing. Comparative tests showed that it only needed double this strength of carbolic acid to give as good results. Since the excretion of pathogenic micro-organisms usually occurs in connection with albuminous materials, sublimate is probably less trustworthy for such hygienic disinfection than carbolic acid. . . . Mercury albuminate itself is, however, not entirely inactive, and does not putrify readily. There are, therefore, good reasons for considering carbolic acid a far more constant and trustworthy wound antiseptic than sublimate, although the latter is the stronger agent. If

sublimate is used in preparing for an operation, and full precautions be taken, then even pure water may answer for wound irrigation. In septic puerperal conditions, it is questionable whether sublimate should be used, since either strong solutions or frequent irrigation may prove toxic. As a wound-dressing, iodoform, thymol, etc., are not inferior to bichloride, and less dangerous. Again, sublimate, contrary to general impression, is volatile. . . . Finally, sublimate may be absorbed in fatally toxic amount. Its local caustic action—principally seen under sublimate dressings—has repeatedly caused eczema, erythema, urticaria, etc. Not a few cases have ended fatally. Mikulicz gives six cases, and says the first case of amputation of the breast, in which he used sublimate dressing of sawdust, containing 1 per cent. of sublimate, had a fatal termination.—(*Annals of Surgery*, July 1885.)

Surgical Treatment of Cysts of the Pancreas.—Dr. N. Senn (*Amer. Jour. of the Med. Sciences*, July 1885) has an exhaustive and able paper on the above subject. After giving a full report of a retention cyst of the pancreas recently under his care, which was successfully treated by laparotomy, he summarises in a compact form the clinical history of similar cases, and draws conclusions founded on his own and other cases as to the proper method of treatment. At the end of his paper he sums up as follows:—1, Cysts of the pancreas are true retention cysts. 2, Cylindrical contraction or obliteration of the common duct or its branches and impacted calculi are the most frequent causes of cysts of the pancreas. 3, A positive diagnosis of a cyst of pancreas is impossible; a probable diagnosis between it and some other kind of cyst amenable to the same surgical treatment is adequate for all practical purposes. 4, The formation of a pancreatic fistula under antiseptic precautions recommends itself as the safest and most expedient operation in the treatment of cysts of the pancreas.

Treatment of Lupus.—The method of interstitial cauterization by the aid of the thermo- or electro-cautery suits a great number of cases of lupus. Old, very extensive cases, with destruction effected, are, indeed, refractory, in a measure, to all medication.

Here we can have recourse to suppurative dermatitis in the manner indicated by Schwimmer. The lupus surfaces are painted over with a saturated solution of pyrogallic acid in ether, or receive a pulverization of this ethereal solution. In either case, the surface becomes covered immediately with a white and adherent layer of pure pyrogallic acid, which is now at once covered over with a layer of traumaticine. Afterwards, an irritation analogous to that of a strong vesicant is produced on the diseased tissues, and at the margin a little swelling without redness. The resulting cicatrix is smooth, and the paintings are renewed until every deposit of lupus has disappeared from the tissues. This method suits lupus vulgaris best.—(*Annales de Dermatologie et de Syphiligraphie*, Janvier 1885, quoted in *Edinburgh Med. Journal*, May 1885.)

Reviews and Notices of Books.

Curability and Treatment of Pulmonary Phthisis.—By S. Jaccoud, Professor of Medical Pathology to the Faculty of Paris, Member of the Academy of Medicine, etc. Translated and edited by Montagu Lubbock, M.D. (Lond. and Paris), M.R.C.P. (Eng.), Assist. Physician to Charing Cross Hospital, etc. New York; D. Appleton & Co.

The possibility of the curability of pulmonary phthisis—the fact that many cases of tubercular disease of the lungs may be arrested—are points perhaps not sufficiently admitted by all physicians. Strong convictions on this matter are, however, necessary to insure such careful attention to treatment as these important and all too common affections demand. Prof. Jaccoud is an enthusiast upon the subject, and his treatise is one which is likely to excite similar enthusiasm on the part of his readers. His experience has been unusually large and varied, and he has for years studied the question from every standpoint. He is, in fact, now looked upon as one of the highest authorities in Europe upon chronic pulmonary disease. We cannot, therefore, but feel indebted to the English translator and the American publishers for having introduced the learned professor's views to

English-speaking countries. It is interesting to find the doctrine of the infectious nature of phthisis maintained here, although the discoveries of Koch were not made till after the first appearance of the work. In view of the proof of the existence of some relation between tubercle and its bacillus, part of the pathological sections would necessarily require to be revised, but this in no way detracts from the value of the enunciated views of this eminent writer. Having considered the "conditions which influence the curability of phthisis," the author takes up "the prophylactic treatment" at some length. This is followed by a description of the principles for the management of the ordinary form of phthisis, then "treatment by mineral waters," and lastly, "climatic treatment." Upon this all important matter of suitable climates, Dr. Jaccoud speaks with all the authority of personal knowledge and experience, having made, upon the spot, careful investigations into the exact metereological conditions of all the noted health-resorts of Europe, as well as Madeira, the Canary Islands, Morocco and Algiers. The book is one of great interest, and will be found of much value to physicians in the important duty of giving such advice to their phthisical patients as they may hope will not seldom result in cure or, at any rate, arrest of progress in the disease and prolongation of life.

Insomnia and other Disorders of Sleep.—By Henry M. Lyman, M.A., M.D., Professor of Physiology and of Diseases of the Nervous System, Rush Medical College, Chicago. Chicago: W. J. Keener. Montreal: Dawson Brothers.

Few conditions are less amenable to treatment than sleeplessness. Its causes are so varied and so complex that it requires the highest skill of the physician to unravel them. The symptomatic treatment is, of course, easy, but it is far from being successful; in fact, it often does more harm than good. To simply prescribe a hypnotic to a person complaining of sleeplessness can be done by a tyro, but to find the cause of sleeplessness and to combat them so as to give sleep to the sufferer is a problem often beyond the most erudite and philosophical

physician. We welcome Dr. Lyman's work, as it is the work of a philosophical physician. In the first chapter he deals with the nature and cause of sleep. An account is given of the experiments of Professor Mosso of Turin on the exposed surface of the cerebrum of three individuals. The results of these investigations prove conclusively that anæmia of the brain is a result and not a cause of sleep, as was formerly supposed. The changes in the blood pressure and circulation were invariably secondary to the excitement of nerve tissue. The cause of sleep lies in changes in the molecular structure of the brain, rather than in fluctuations of the blood-current. In the second chapter the author deals with insomnia, and he first mentions those causes of wakefulness which are due to irritation of the peripheral portions of the sensory apparatus, and, secondly, those caused by morbid states of the central nervous organs. In the third and fourth chapters, the remedies for insomnia are separately described and the treatment of this condition as it arises in particular diseases. The final chapters of the work are taken up with a very instructive description of dreams, somnambulism, and hypnotism.

The work is one we can confidently recommend to our readers. Its only shortcoming, in our opinion, is that it does not as fully deal with the pharmacology of the great hypnotics—opium, chloral and paraldehyde—as a work devoted to insomnia should. Little or no attention is given to the marked untoward effects of the first two of these agents.

Inebriism: A Pathological and Psychological Study. By T. L. Wright, M.D., Member of the American Association for the Cure of Inebriates. Columbus, O.: Wm. G. Hubbard.

This work deals with the subject of inebriism principally on psychological grounds, and while the author confines himself to this part of his subject he performs his task well. The same, however, cannot be said of the pathological part of the work. The first section is devoted to the consideration of the symptoms of acute intoxication and the changes brought about by this state

in the tissues, but especially in the central nervous structures. The author considers that the deleterious influence of alcohol is not directly due to its primary action on the tissues, but to the lessened oxidation that it causes. He would ascribe all its baneful influence to the retention of the carbonic acid and urea in the blood. It is unfortunate that he has not advanced any arguments whatever in support of this assertion. We believe there are none. There is a lack of the scientific method in dealing with the subject, which detracts greatly from the value of the work. The author has evidently the best of intentions to point out the causes and best means of treating inebriism, but in order that such an undertaking should lead to the greatest success, it is a necessity that no loose statements should be made, that the truth, and only the truth, should be made known. On page 135 the statement is made that progressive paralysis of the insane is a disease peculiarly the child of alcoholic indulgence. This is certainly an over-statement. It is generally admitted that a considerable number of cases of paralytic dementia are brought about by alcoholic excesses, but it is not unfrequently the case that the drinking and the paresis are results of a common cause, and that a distinctly organic one. The symptoms of alcoholismus and general paralysis are different, as are also the anatomical changes which underlie them.

We have drawn attention to some of the faults of this work. In it, however, both professional and lay readers will find much that is instructive, in spite of the author's verbosity of style.

Practical Surgery: Including Surgical Dressings, Bandaging, Fractures, Dislocations, Ligature of Arteries, Amputations, and Excision of Bones and Joints.—By J. Ewing Mears, M.D., Lecturer on Practical Surgery, Jefferson Medical College, &c. With 490 illustrations. Philadelphia: P. Blakiston, Son & Co.

The first edition of Dr. Mears' book was issued exactly seven years ago. Judging from the greater dimensions of the present volume, the author has not been idle in the interval. This edition is fully three times the size of the first, and excels it in every

particular. Beyond a few of the illustrations, the author does not make any pretensions to originality. With one or two exceptions, however, he has brought his book well up to the most recent observations and teachings. The part devoted to "surgical dressings" is very complete in every particular, giving Lister's method with its various modifications. As usual with books of this kind, much unnecessary time and space have been devoted to "bandaging," as though students or others could learn how to bandage from books. It is well known that this art can alone be acquired by long and patient practice. The chapter on "Fractures" is very well written, and the illustrations are exceptionally good. We are disappointed, however, at finding no reference to the method recently suggested and put into practice of treating fracture of the patella—namely, exposing the fragments and wiring them. Nor is the suggestion made that, where the effusion into the joint is considerable, aspiration may be employed. Intracapsular fracture of the femur is admirably handled, especially with regard to treatment. We are quite with the author in the precautions which he takes to secure bony union in this form of fracture. Dr. Senn's excellent paper on "Fractures of the Neck of the Femur," read some time ago before the American Surgical Association, we are pleased to see referred to, and his immediate treatment with plaster-of-paris splint strongly recommended.

The directions given for the performance of the various amputations and excisions are altogether very full and accurate. We confess to some disappointment, however, that the method of sawing the bones in excision of the knee joint, first suggested by Dr. Fenwick of this city, is not referred to. Considering, also, that Dr. Fenwick's method is so fully described by himself in the last volume of the International Encyclopædia, our surprise is made greater. We would beg to suggest that the author gives this plan a trial when next excising the knee-joint, as we feel satisfied it needs only a fair test to become more universally adopted.

Altogether, we cannot speak too highly of the volume under review, and we predict for it a large circulation both among students and general practitioners.

A Text-Book of Nursing, For the use of Training Schools, Families, and Private Students.—Compiled by CLARA S. WEEKS, Graduate of the New York Hospital Training School; Superintendent of Training School for Nurses, Paterson, New Jersey. New York: D. Appleton & Co.

This little book is one of the best of its kind we have yet seen. It is full of information of value to the nurse, and this is conveyed in such a clear and concise manner that any woman of ordinary intelligence cannot fail to comprehend it. Although the writer modestly calls her book a compilation, it nevertheless treats of many subjects which we have not noticed in other works of the kind. Thus there are some admirable hints on the "Observation of Symptoms," in connection with which is given a very good form of table for bedside notes. "Massage" is likewise treated at considerable length, and the chapter on "Surgical Nursing" is very complete. The illustrations are all well executed, those illustrating the circulation in connection with the treatment of hemorrhage being especially deserving of mention.

The Law and Medical Men.—By R. VASHON ROGERS, Jr., of Osgoode Hall, Barrister-at-Law. Toronto (Canada) and Edinburgh (Scotland): Carswell & Co.

Though the title of this book may be considered rather uninviting, the contents are exceedingly interesting and instructive. The intention of the author is to present to medical men the legal aspects of our dealings with the public. Thus such important questions as fees, malpractice, medical experts, relations with patients, etc., are fully dealt with. Brief chapters are also devoted to Dentists, Druggists and Partners. Cases are reported at length which have occurred in Great Britain and the United States, as well as in this country, so that it will doubtless become a book of reference for members of the legal profession also. The author, however, deals with the law as it exists in Ontario only, so that it loses much of its interest for us in the Province of Quebec, where the civil law is based on the Code

Napoleon. However, notwithstanding that, we would recommend this book strongly to our *confrères*, and trust that they may derive as much pleasure and profit from its perusal as we have experienced.

A Reference Handbook of the Medical Sciences. Being a complete and convenient work of reference upon topics belonging to the entire range of scientific and practical medicine, and consisting of a series of concise essays and brief paragraphs arranged in the alphabetical order of the topics of which they treat. Prepared by writers who are experts in their respective departments. Illustrated by chromo-lithographs and fine wood-engravings. Edited by Albert H. Buck, M.D. Vol. I. New York: Wm. Wood & Co.

It has been very generally known for more than a year past that this ambitious handbook was in course of preparation, and from the names of the contributors we were led to expect a high class of work. We may say at once that we feel satisfied that its many excellencies will commend it even to those whose anticipations may have been most sanguine. The enormous field which it is proposed to cover must have necessitated great labor in preparation, and great care in the selection of writers of known ability to do their share in ensuring a compilation of sound teaching and complete information. To judge from the first volume, now before us, the editor has amply proved his capacity for the arduous undertaking he set before him—his previous experience in connection with the successful translation of Ziemssen's great Cyclopædia of Medicine having no doubt been of great service. Vol. I includes from AAC to CAT, and turn, if you will, to any given word having reference to Medicine, Surgery, Anatomy, Physiology, Chemistry, Therapeutics, Ophthalmology, Gynæcology, or any other of the numerous branches of scientific and practical medicine, and you will find a clearly written article giving, without verbosity, the substance of our present knowledge upon that subject. It is called a handbook of reference, but is in reality a cyclopædia, so thoroughly are many of the matters

in hand treated of. Indeed its owner will be at once in possession of a small library in itself. The plan of having numerous contributors is that which commends itself as the most effective, and is that which has been followed in the most popular works of this kind at the present day. A glance at the list of contributors shows the names of many of the best known writers in the United States, and we are glad to observe that quite a number of Canadian physicians have also been enlisted in the good work. We may mention amongst the latter, Dr. Gardner on the Female Bladder, Dr. R. MacDonnell on the Anatomy of the Abdomen, Dr. Mills on Chemistry of the Brain and Nerves, Dr. Geo. Ross on Thoracic Aneurism, Dr. Shepherd on Anomalies of Arteries, etc., Dr. Jas. Stewart on Antipyretics and other subjects connected with Therapeutics, and Dr. Wilkins on Acetonæmia and Acetonuria. We are glad to know that a good subscription list has already been secured in Canada, and hope that this will now be largely extended. The get-up is in every respect excellent. A few well-executed chromo-lithographs are introduced, and a profusion of woodcuts has allowed the writers the opportunity of illustrating many original cases.

The Physician's Visiting List (Lindsay & Blakiston's) for 1886. 25th year of its publication. Philadelphia: P. Blakiston & Co.

The Medical News Visiting List for 1886. Philadelphia: Lea Brothers & Co.

The former comes to us in the well-known form, and will no doubt maintain its standing as a popular favorite with the profession. The latter is particularly neatly gotten up. A special feature is the manner in which the edges of the leaves are nicked out for the finger so that each separate department can be turned to in a moment. It is "just the thing."

Books and Pamphlets Received.

Lectures on the Diseases of the Nose and Throat. By Chas. E. Sajons, M.D. With 100 chrome-lithographs. Philadelphia: F. A. Davis, publisher.

An Atlas of Clinical Microscopy. By Alexander Peyer, M.D. Translated and edited by Alfred C. Girard, M.D. First American from the manuscript of the second German edition. With additions; 90 plates. New York: D. Appleton & Co.

Rationalism in Medical Treatment, or the Restoration of Chemism: the System of the Future. By William Thornton. Boston: Published by the author.

Epilepsy and other Chronic Convulsive Diseases, their Causes, Symptoms and Treatment. By W. R. Gowers, M.D. F.R.C.P. New York: Wm. Wood & Co.

Post-mortem Examinations, with especial reference to Medico-Legal Practice. By Prof. Rudolff Virchow. Translated by T. P. Smith, M.D. From the fourth German edition. Philadelphia: P. Blakiston, Son & Co.

Epitome of Diseases of the Skin. By Louis A. Duhring, M.D. Philadelphia: J. B. Lippincott Co.

A Text-Book of Pharmacology, Therapeutics, and Materia Medica. By T. Lauder Brunton, M.D., &c. Adapted to the United States Pharmacopœia by Francis H. Williams, M.D., Boston, Mass. Philadelphia: Lea Brothers & Co.

Acne, its Etiology, Pathology and Treatment. By L. Duncan Bulkley, A.M., M.D. New York and London: G. P. Putnam's Sons.

The Pedigree of Disease. Six Lectures on Temperament, Idiosyncrasy and Diathesis. By Jonathan Hutchinson, F.R.S. New York: William Wood & Co.

A System of Obstetric Medicine and Surgery, Theoretical and Clinical. By Robert Barnes, M.D., and Fancourt Barnes, M.D. 131 woodcuts. Philadelphia: Lea Brothers & Co.

Manual of the Diseases of Women. A concise and systematic exposition of the Theory and Practice of Gynæcology. By Charles H. May, M.D. Philadelphia: Lea Brothers & Co.

The Principles and Practice of Surgery. By John Ashurst, Jr., M.D. Fourth edition; enlarged and thoroughly revised. With 597 illustrations. Philadelphia: Lea Brothers & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, Oct. 23, 1885.

T. G. Roddick, M.D., President, in the Chair.

New Officinal Preparations.—Dr. Reed showed a series of drugs and preparations illustrating the additions to the British Pharmacopœia of 1885, which had been prepared for him by A. H. Mason, F.C.S. They were examined by the members with much interest.

Dr. Wm. Gardner exhibited the following pathological specimens :—

1. *Uterus Septus, with atresia and hæmatometra of the left chamber.*—This specimen was exhibited at the meeting of the Canadian Medical Association, at Chatham, last September, and described in this Journal in the report of that meeting.

2. *A Dermoid Ovarian Cyst*, removed 15 days previously from a woman 47 years of age ; three years past the menopause and the mother of children. The tumor was the size of a large adult head, and contained a greyish-yellow, ochre-colored, thick fluid, a bunch of hair, one tooth, and a plate of bone in the cyst wall. It had been of slow growth, causing very little in the way of symptoms, but was removed because of the fact that such patients are in constanst danger of peritonitis from bursting or suppuration of the tumor, and of axial rotation, with consequent gangrene or hemorrhage within the cyst. Axial rotation of the tumor is an accident to which it would appear dermoid cysts are especially prone. The patient made a good recovery.

3. *A small, solid Ovarian Tumor of the left side*, removed a week previous to the date of meeting from a married woman, aged 56, the mother of several children, and five years past the menopause. The tumor measured $4 \times 2\frac{1}{2}$ inches, was very hard and heavy for its size, and contained a cyst as large as a small hen's egg. This was ruptured during the operation. The cut surface was very firm, not markedly fibrous, of faintly yellow color. The disease was confined to the ovary. The pedicle was slender. There was a general enlargement of the fundus of the uterus, which also presented a nodulated projection. The microscopical characters determined by Dr. Wyatt Johnston, lecturer on Pathology and Morbid Anatomy in McGill University, leave the question of the real nature of the growth in doubt to a certain extent. Dr. Gardner remarked that solid ovarian tumors are exceptionally interesting, because of their rarity and frequently malignant nature. Whatever their nature, if there be no evidence of infiltration of surrounding tissues, they ought to be removed. The propriety of this can often only be determined by abdominal section. There is ample evidence, from the experience of Sir Spencer Wells and others, that unmistakeably sarcomatous tumors of the ovary may be removed without recurrence for many years or indefinitely. Dr. Johnston's report is as follows : " Tumor, on section, very firm, and consists of two different parts. The first, which is firmest, lies more superficially and forms the bulk of the tumor. On microscopic examination,

this portion is composed of epithelial elements in the shape of fully-formed and well-developed cylindrical cells arranged in circles, having the appearance of glandular ducts. These cells are uniform in size, and do not appear to infiltrate the surrounding tissue. The matrix in which these are imbedded is abundant and consists entirely of mature connective tissue, with scarcely any nuclei. The lesser and more deeply-seated half of the tumor is, in respect to its epithelial elements, precisely similar to the half just described, but its connective tissue element is entirely embryonic, consisting of young spindle cells with abundant nuclei, and apparently in vigorous growth. From the general appearance of the tumor, it looks rather as if the mature half was being developed out of the younger, than that the younger tissues were sarcomatous, and developed in addition to the older formation."

Extraction of Large Calculi.—Dr. Hingston, alluding to a large calculus, exhibited to the Society some months ago, which he had removed by the lateral method, stated that a portion of the medical press, in noticing it, curiously misrepresented Sir Henry Thompson in not having the context considered as well as the sentence quoted. The quotation was : " No incision can be made in the region which belongs to that operation " (the lateral) " through which a calculus of three ounces or more can be extracted." The context, which greatly modified it, is : " Laceration, either avowedly made by instruments, or but half concealed under the name of gradual distention, invariably takes place, and that affecting very important structures often to a large extent." In making this correction, Dr. Hingston observed that while he admitted that the extraction of large calculi would often be attended with more or less laceration, he thought the limit of three ounces was below the possible, and should not decide the question as between the lateral and supra-pubic operations. In the last case published in Canada, the supra-pubic operation for a calculus of three ounces was fatal, while the lateral operation for a calculus nearly twice that size was successful, and without injury to the neck of the bladder or other important structures.

Dr. Mignault read the following report of the kidney removed by Dr. Hingston, and exhibited at last meeting :—The organ presented a uniform grey color, and was much enlarged, measuring about six inches in length. Upon section, the cortical substance was very thin, and seemed to have lost its usual elements, being of the same grey color as the external surface of the organ, and being also tough and fibrous. The pyramids of Malpighi have entirely disappeared, and the usual prolongations

of the capsule are very thin and fibrous, leaving large cavities between them. The pelvis of the kidney was much contracted, and the opening of the ureter could not be distinguished. The ureter was not removed with the specimen, or, at least, was not with it on examination.

Extirpation of Kidney for Calculous Pyelitis.—Dr. Shepherd showed a kidney which he had removed from a woman some five weeks before. The history of the case is as follows :—

Eliza T., aged 24, married, was admitted into the General Hospital under Dr. Wilkins, on the 10th of August, 1885, suffering from emaciation, general weakness, and a painful swelling on the left side of the abdomen. Family history threw no light on the case ; no consumption. Had herself always been healthy up to nine months before entrance into the hospital ; at that time she began to loose flesh and to have pains in left side of abdomen, which occasionally extended down to the thigh, but these were never severe. Has had four children, and after birth of last child, five months ago, first noticed a tender swelling or rather fulness on left side of abdomen ; at this time she noticed her urine was milky and that a deposit was thrown down when it was left standing for a short time. Had never passed any blood or had attacks of renal colic, nor had she ever had chills or sweatings. When admitted into the hospital she was in a condition of extreme emaciation and very weak ; pulse was 140 and temperature 100°F. She had no cough and her lungs were probably healthy. She had, however, frequent and painful micturition, and the urine contained large quantities of pus ; some days, however, it would be quite clear. On examining the abdomen the superficial abdominal veins were found much enlarged and a distinct fulness was seen in the left lumbar and iliac regions. Palpation revealed a large tumor which extended across the abdomen to within one inch of the umbilicus, above it reached as high as the spleen, and below could be felt reaching down as far as the brim of the true pelvis. By bimanual palpation the tumor could be grasped between the hands and moved slightly ; no fluctuation could be distinctly made out. The tumor was very tender on pressure. Towards the latter end of August, Dr. Wilkins transferred the case to the surgical wards under Dr. Shepherd. At that time her condition was better than on entrance to hospital, and she had gained flesh. The tumor had not increased in size since she had been under observation, but her pulse continued rapid and her temperature ranged from 99° to 101.5°, the other symptoms were much the same. After a consultation with his colleagues, Dr. Shepherd decided to explore

the kidney and to perform either nephrotomy or nephrectomy, as would be determined by the condition of affairs.

On September 17th, the patient having been etherized, the right kidney was first examined by palpation and made out easily to be normal size and apparently healthy ; it was freely movable. An incision was then made, as for colotomy, in left lumbar region, between last rib and crest of the ilium, commencing at the outer edge of the erector spinæ muscle, and extending outwards for some five inches ; the kidney tumor was soon reached and found to be freely fluctuating ; it was aspirated and some stinking pus withdrawn ; a needle was passed in and soon came in contact with a calculus. The tumor, which was somewhat larger than a child's head, was now freely incised and a large quantity of foul-smelling pus evacuated through the opening thus made. The finger was introduced and the pelvis was found filled with a large calculus ; owing to the disorganized state of the kidney and the bad general condition of the patient it was decided immediately to extirpate the kidney. The upper end was first freed without difficulty, and then the lower end and posterior portion ; these latter portions were freed with some difficulty, especially the lower end, which reached far down towards the true pelvis. To enable the hand to get in freely, the original incision was enlarged by incisions above and below at right angles, and several more incisions made into some of the pus-filled saccules. The kidney was now easily delivered through the wound and the vessels entering the hilus tied with silk and divided. The ureter, into which a portion of the calculus extended, was then ligatured and divided, and after cutting some strands of cellular tissue with scissors the kidney came away. Whilst freeing the kidney there was considerable venous hemorrhage from the torn vessels at upper and posterior part, which, owing to the pressure of the tumor, were much engorged. This was stopped by sponge pressure. The large cavity caused by the removal of the kidney was quickly filled up by the intestines pushing forward the peritoneum. The cavity was washed out with bichloride 1 to 2000, and a large drainage tube introduced. The wound was brought together with catgut sutures and dressed with iodoform powder and sublimate jute pads. The patient, although suffering considerably from shock, recovered well from the operation. She had some vomiting, which was controlled by champagne, and for the first 24 hours had brandy and beef-tea per rectum. During the first night there was considerable oozing, and the dressings had to be changed the second day. At this dressing the drainage tube was much shortened. More than 30

ounces of urine were passed the day after operation. Her pulse, which after the operation was very weak and 160, soon fell to 120, and temperature after first day never reached 100°F. The woman rapidly recovered, and the wound with these dressings healed by first intention, except at the point where drainage-tube had been. At the end of the third week she was able to wheel herself about the ward in a chair, and during the past week has been walking about. Her appetite is good, and she is rapidly regaining flesh. The daily amount of urine excreted is from 35 to 40 ounces.

The kidney was now exhibited, and was seen to be of large size and composed of a number of saccules which had contained pus ; the pyramidal portion had all disappeared, and the cortex was about a quarter of an inch thick. The pelvis was filled with a large oxalate of lime calculus, which extended down into the ureter, almost completely blocking it up. In one of the saccules at the lower end of the kidney was a small round calculus the size of a marble. Dr. Shepherd said about a pint of pus had been removed from the kidney.

Dr. Fenwick congratulated Dr. Shepherd on the success of his case, and said that it had never been his fortune to remove a kidney, although he had many times seen it whilst performing colotomy, and had occasionally cut down on it for abscesses in its neighborhood. He had always thought that there was not much difficulty in the operation, and that if the patient survived the shock the prognosis as to recovery was good.

Dr. Hingston asked why Dr. Shepherd did not remove the stone and leave the kidney, and why he cut the quadratus lumborum muscle.

The President said he had been present at the operation, and thought that Dr. Shepherd had acted properly in removing the kidney, as the woman's condition was such that she could not have stood the drain which must have still gone on had the stone merely been removed ; besides, removal of the stone could not have been effected without further serious injury to the organ. He was pleased to find how much more room was obtained by making incisions at right angles to the first one, and how easily the kidney was delivered when this was done. He himself had never performed nephrectomy, though some two years ago he had performed nephrotomy in a case of scrofulous pyelitis ; the patient was relieved by the operation, but subsequently died of phthisis.

Dr. Shepherd, in reply, said that he did not think removal

of the stone could have been easily accomplished without so much injuring the kidney as to render it useless ; as it was, the kidney was so disorganized that he did not think it worth preserving, and the woman's condition before operation was so bad that he thought complete removal of the source of disease was by far the best procedure. He had cut the quadratus lumborum muscle so as to get more room posteriorly. He always did so when performing colotomy, and it never interfered with the good result of the operation. Dr. Shepherd considered the operation more dangerous than difficult.

Excision of the Uterus.—Dr. Trenholme reported that the two cases he had brought before the Society some weeks ago were doing well (one excision having been for uterine fibroid, and the other for cancerous disease).

(*From our own Correspondent.*)

CHATHAM MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, Nov. 5th, 1885.

The President, Dr. Bray, in the Chair.

Case of Gunshot Wound of Base of Lung, with Implication of Colon—Recovery.—Dr. Backus read a report of this interesting case, which came under his care while acting as ship surgeon on the steamship Glencoe, February 11th, 1884. It was the result of an accident which happened to the cabin boy, aged 15. The entrance wound was about one-third of an inch in diameter and situated 2½ inches to the left of the median line, in front of and on a line with the cartilage of the 8th rib. The bullet lodged beneath the integument, two inches beneath the axilliary line in the 8th intercostal space. Shock was severe, but consciousness was not lost, primary external hæmorrhage was slight. Intense pain was complained of at the lower angle of the scapula, which was controlled by morphia. Some particles of clothing were removed from the wound, but no probing was attempted. A wide roller bandage was placed around the chest, holding in position a compress of lint soaked in carbolized oil. Severe vomiting occurred during the night, the ejected matters consisting simply of the contents of the stomach mixed with bile. There was no hæmoptysis following the accident, or at any subsequent period. The bullet was removed the following morning, under chloroform, and was found to be three-quarters of an inch in length and half an inch in diameter. On the third day the left side became markedly emphysematous,

and signs of pleurisy and pneumonia developed. His temperature ranged from 100° to 103° F., pulse from 120 to 132, and respiration from 40 to 52 per minute. Secondary hemorrhage occurred on the 16th of February, about midnight, while the patient was asleep. It was controlled by means of ergot and turpentine internally, and cold applications and pressure externally. It recurred the next day, and was checked by similar means. At this time air passed freely in and out of the anterior wound during respiration. The wound behind, through which the bullet was extracted, closed in a few days. Both wounds were treated with compression of carbolized lint and strapping. The wide bandage had to be abandoned after the second day, as it seemed to augment the pain and interfere with the respiatory movements. The general treatment was supporting and stimulating, with morphia when rendered necessary. The patient was landed February 19th at Point de Galle, on the island of Ceylon, and at once conveyed to the hospital there. He was not again seen by Dr. Backus until June 2nd. While in the hospital he was under the care of Dr. Brickenberk, from whom Dr. Backus obtained the subsequent history of the case. On admission his temperature was 99·6°, pulse 148 and respiration 54. His wound was dressed antiseptically, and he was ordered a quinine mixture, opium *pro re nata*, liquid food, and brandy. On February 22nd a marked fæcal odor being observed about his dressings, they were removed, and 64 ounces of offensive fæces escaped from the opening. The wound was then syringed with a carbolic acid lotion and a drainage-tube inserted. By March 5th the wound had closed, but rigors and an elevated temperature occurring the wound was reopened, when 24 ounces of fæcal fluid escaped. On March 15th the wound was finally closed, and on the 30th of the month he left the hospital. When again examined by Dr. Backus the boy was in good health, but complained of pain on the injured side and shortness of breath on slight exertion. Inspection revealed lesser respiatory movements on the left side, which measured three-quarters of an inch less than the right. The percussion note was slightly duller at left base. On auscultation no abnormal sounds were detected, though breath sounds come feeble.

The case is somewhat remarkable, in the entire absence of blood from his sputum, vomited matters, and from his stools, at any time; and there being no symptoms of peritonitis, also his recovering under adverse circumstances.

Remarks on Vaccination.—Dr. Flemming considered it an opportune time for offering for discussion the subject of vaccination. He referred to the generally conceded fact that it was perhaps the greatest discovery for which the world was indebted to medicine; but notwithstanding statistical and well-established proofs as to its utility in saving millions of lives from premature and horrible death, still a few remained to obstruct its uinversal adoption. He stated that when he first commenced to practice, he was in the habit of following the English practice of making three to five punctures about half an inch or more apart, as statistics show that from three to five cicatrices give greater immunity than less; he then used humanized vaccine, but latterly, since it was the fashion, he had been using bovine virus, from which he had obtained effects, local and constitutional, far more severe from one insertion, than from five of the humanized lymph; from this he concluded that one insertion of the former ought to be as effectual as five of the latter. He, however, gave his preference to properly selected humanized vaccine lymph, as he considered it gave equal immunity without inflicting such distressing symptoms. The popular belief that there is a direct ratio between the susceptibility of persons to vaccination and smallpox, was shown by statistics to be erroneous. He urged vaccination as necessary, especially at every threatened invasion of the enemy. He thought that the law requiring all children before three or four months old to be vaccinated ought to be as vigorously enforced in Canada as in England, as it is considered by the highest authorities the most suitable time for vaccination, the child being free from the disturbing influences of teething, nourished by a milk diet, enjoying as a rule perfect health, having no fear of the operation, less sensible to pain, incapable of interfering with the vesicles, and that one-quarter of the deaths from smallpox are in children under one year. He also spoke of the responsibility of the physician in doing his work efficiently and properly, and concluded his remarks by referring to the annoying and distressing complications which sometimes arise and cause much of the public prejudice against vaccination.

Dr. Rutherford said he had almost entirely given up using bovine and returned to the use of humanized vaccine lymph and arm-to-arm vaccination. Stated that the law in Ontario regarding revaccination was not compulsory unless smallpox was threatened, and considered it the duty of medical men to use their efforts in obtaining a more stringent law.

Dr. Tye had formerly vaccinated entirely from arm-to-arm, but latterly had been using bovine virus. Is strongly in favor of the former procedure; thought the symptoms produced by the bovine virus unnecessarily severe and its effects more frequently spurious. Considered revaccination proper and safe, and should be insisted upon; instanced an epidemic in a tribe of Indians in the county of Bothwell, in which 48 cases occurred with 16 deaths, the source of the contagion being a chief, who had been primarily vaccinated but never revaccinated. He contracted the disease on an official visit to Ottawa. Had only one pustule, which was unobserved until others had contracted the disease in a malignant form.

Dr. Holmes stated that the Michigan State Board of Health condemned the use of humanized virus, and they considered that virus which had passed through one person was worthless because unreliable; but he could not agree with such statements, and cited a case which occurred in his practice where a father was attacked with a severe type of smallpox,—the other members of the family, 10 in number, were at once vaccinated with humanized virus, and none contracted the disease though exposed to it daily. To avoid unpleasant complications vaccination should not be done promiscuously; teething children, pregnant women, people in feeble health, persons recently exposed to the exanthemata or erysipelas, or suffering from skin diseases, should not be vaccinated unless exposed to smallpox.

Dr. Murphy had vaccinated recently a large school of girls with bovine virus, and they were all very ill; had high temperatures and marked constitutional symptoms; vesicle did not develope, but instead a sloughing ulcer, and in some cases abscess in axillary glands. He considered the virus not sufficiently attenuated before physicians obtained it. Would use humanized virus in future; urged compulsory vaccination.

The President considered bovine and humanized virus equally effective, but preferred arm-to-arm vaccination as giving the same immunity with less unpleasant results, thus avoiding public prejudice. Thought that medical men should cry down the present popular demand for bovine vaccine. Had a case recently in which a crop of umbilicated vesicles appeared over the entire body after a bovine vaccination. Spoke strongly in favor of making revaccination compulsory.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

The Treatment of Typhoid Fever.—By Prof. J. M. DaCosta (*Coll. and Clin. Record*):

1. Hygienic.—Place the patient in a large, well-ventilated room, so that he may get *plenty of fresh air*. Allow but one person (nurse) with him. Keep friends away. Enjoin cleanliness. Keep patient washed twice daily with vinegar and water, or a solution of permanganate of potassium. Disinfect the dejections with carbolic acid or chloride of zinc, etc.

Nourishment.—There are times when the patient is weakest, as in the early morning; this is the case in all low fevers. Nourish him every two hours with beef or mutton broths, alternating with milk. Other broths, as chicken, etc., may be used. If the patient craves for more solid food, allow him at the midday meal a little arrowroot, boiled in milk, or a soft-boiled egg. Excepting these, allow no form of solid aliment until convalescence is completely established, and even then be careful. *Be sure to feed the patient between 4 a.m. and 5 a.m.;* even wake him at this time to feed him. Allow a liberal supply of water, or toast water, ginger syrup and water, or claret and water. It will keep the kidneys washed out.

2. Medical Treatment.—Different plans have been instituted: 1. Quinine, which has been justly abandoned. 2. The mercurial plan—calomel, grs. v–x per diem, at the first stage of fever—said to modify the intensity of the fever process. Not an effective process. 3. Carbolic acid, gtt. j–ij, in mint water, every two hours. This remedy is not to be relied upon. 4. Iodine treatment, as Lugol's solution, gtt. ij, four times a day. This promises something good in the way of treatment. 5. The plan used by Dr. Bartholow, in the following combination: ℞ Acid. Carbolic., f ʒ j; Tinct. Iodinii, f ʒ ij. Dose, gtt. i–iij, every two or three hours. This is a good plan of treatment. 6. My own plan is by the use of mineral acids. Those that use this plan in Germany prefer sulphuric acid; in England, hydrochloric; in France, phosphoric; and in America, nitro-hydrochloric acids. Of the last, an ordinary prescription is ♏ xx of the dilute acid in simple elixir. This will also control, to some extent, the diarrhœa.

Do nothing else if you can possibly get along without, but guard against complications, and treat them immediately as they

arise. The first prominent symptom to be noticed is the *diarrhœa*. If there are but three stools, unless they be unusually large, do nothing. If very profuse, give a little tinct. opii camphorata at night, or an opium suppository, gr. j. Should this fail, use: ℞ Bismuthi Subnitrat, gr. x–xx; Opii, gr. ss–j. Every three hours. If this fails, try carbolic acid, gtt. j, with morphinæ sulph., every three hours. Often cupri sulph., gr. 1–12, with opium, gr. 1–3, is very effective.

For the Tympany, cold applications, or injections of vinegar, f ʒ j–ij to water Oj. Internally administer turpentine, gtt. vij, in emulsion, with morphia, gr. 1–48. Often strychnia is useful, but secondary to the above.

Thoracic Symptoms.—The pulmonary congestion occasions cough; the patient's position must, therefore, be changed frequently. If the patient is not too feeble, use dry cups. The internal use of turpentine is of avail when marked fever is associated with the congestion. Do not give expectorants. If there is a large accumulation of mucus, use aromatic spirits of ammonia.

Sustain the circulation by quinine in tonic doses, gr. vj–x, in the twenty-four hours, but alcohol is the best, repeated in small doses, to keep up the heart's action. In the early morning increase the dose. Under stimulus the pulse of 150 should come down to 120 or 110. The first sound of the heart is the key to the amount required. From four to ten ounces may be necessary. For nervous symptoms, as headache, delirium, etc., give opium with camphor or with belladonnæ. Chloral is the most useful, but do not give it when the heart is weak.

For high fever, cold water is excellent. Put the patient in a bath until the temperature of the water gets to 72°F. The tendency to intestinal hemorrhage is greater in this treatment than by quinine, which is next in importance, and should be given in doses of ʒi–ʒss in the day.

For intestinal hemorrhage, ergotin, gr. ij–vij, hypodermically, or f ʒ j fluid extract of ergot may be given every hour or two. Sulphuric acid is also useful. Opium, to keep the bowels at rest, is indispensable. Cut down milk and stimulus now.

Spreading tenderness (peritonitis).—Tinct. opii deodorat., gtt. x every hour, and gr. j opium suppository at the same time. The suppository must not be repeated for four hours.

Should the patient have *parotitis*, ice is the best treatment; also tinct. ferri chloridi, to enrich the blood. For the *functional palsies*, use strychnia.

Prolonged Retention treated by Aspiration daily for Five Weeks.—Dr. J. T. Hague thus writes in the *Lancet*, August 29: Amongst instruments of modern invention, few are of more practical use in the treatment of disease than the aspirator, and one of its most generally recognized uses is for emptying the bladder in cases of retention where a catheter cannot be passed. In such cases the choice of treatment lies between puncture of the bladder per rectum with a curved trocar and canula—a proceeding certainly requiring expertness—and aspiration immediately above the pubes. The latter treatment is certainly easy, and, as I think, safe. At any rate the following case bears out that belief:—On September 3rd last I was called to see a patient, aged 90, who was suffering from retention of forty-eight hours' duration, due to enlarged prostate. Of course catheterization was the treatment indicated, and this was tried most carefully and perseveringly by Dr. McGuinness and myself with both silver and soft catheters; but, partly by reason of the enlarged prostate and partly from numerous false passages, which made it almost impossible to keep the catheter in the urethra, all efforts to reach the bladder with catheters failed. Then, as it was an absolute necessity that immediate relief should be given, we decided to aspirate. That was done, and thirty-five ounces of urine were drawn off, the operation causing but little pain. On the following morning, as no ill effects were visible, it was decided to aspirate again, instead of trying the catheter, so that the urethra might recover itself and the false passages heal by rest. This was done, and has been repeated daily for thirty-four days, all the attempts by several surgeons to catheterize during this meeting with failure. On the 7th of October, however, I succeeded twice in passing a soft catheter. This patient, therefore—an old man of 90—passed no water per urethram for five weeks, during which period he was aspirated thirty-four times, and has had neither cystitis nor peritonitis; the only discoverable ill effect being an inflammatory thickening about the seat of the numerous punctures. This is the third case in which I have aspirated the bladder—one case being a stricture with acute gonorrhœa; the other, calculus impacted in the urethra. In neither of these cases, however, was it necessary to operate more than once. I have never found any ill consequence arise from the operation, and I cannot see what advantage the old method of puncture through the rectum possesses over it. It would certainly have been impossible to have repeated this latter proceeding thirty-four times.

CANADA

Medical and Surgical Journal.

MONTREAL, DECEMBER, 1885.

CHOLERA AND THE COMMA BACILLUS.

The recent investigations on this subject, owing to their occurrence at a time when Europe and America are dreading a general cholera epidemic, have received a far greater share of public attention than has ever attended any previous investigation of this nature. Since the theories regarding the toxic action of bacteria in diseases have obtained general credence, many of the objections, obtaining so long as bacteria were regarded as having local effect, are now obviated, and cholera can rationally be looked upon as a disease of probable bacterial origin.

The main interest of the question centres now on the point as to whether Koch's bacillus is or is not the cause of the malady. Before a particular organism can be clearly held as the proven cause of any special disease, after its occurrence in connection with this disease has been fully established, the natural history of the organism itself must be clearly made out and distinguished from all others and then shewn capable of producing the disease. Even at this stage the proof would be greatly weakened if some other organism appeared to have probabilities in its favor. In the case of cholera, though the *co-incidence* of the comma bacillus and the disease are thoroughly established—(it is interesting here to note that Virchow, in 1848, was the first to note the remarkable abundance of vibrionic organisms in cholera evacuations)—yet up to 1884 the bacillus had appeared perfectly incapable of producing cholera experimentally, while its identity was constantly disputed, and it was held to be the same as numerous other bacteria.

The chief upholder of the theory that Koch's microbe was identical with other forms, normally present in the mouth, was Dr. Klein. It had long been known that several forms of comma-like bacilli occurred in the mouth, and no one was better aware of that fact than Koch himself, and accordingly he laid little stress upon the mere appearance of his organism, basing its identity entirely on physiological grounds, chiefly on its mode of growth and chemical and thermal peculiarities, and claiming that in these points it differed from all other known bacteria—a statement which Klein has failed even to shake, still less to disprove, by his Cholera Commission Report or by his demonstration in March last before the Medical and Chirurgical Society of London, his organisms having utterly refused to grow on the very food upon which Koch's thrived best.

Among the promoters of other cholera microbes, none has become so notorious as Dr. Ferran of Madrid, the discoverer, or, more strictly speaking, inventor of a remarkable modified cholera virus, which he declared capable of producing immunity from cholera in persons inoculated with it, and by the sanction of the Spanish Government operated upon thousands of the inhabitants of cholera-infected districts. Although Dr. Ferran's enterprise proved a brilliant financial success, yet certain circumstances in connection with it have brought both himself and his organism into very bad repute. His flat refusal to redeem a promise of demonstrating to a competent body of foreign savants the nature of his virus and his methods of investigation is most reprehensible; and further, though it has not yet transpired whether he went so far as actually to "doctor" his statistics, or whether he merely inoculated them with some of his "modified virus," the fact remains that as published by him they remain in distinct contradiction to those of a government commission appointed to observe and report upon the results of his inoculations.

All the negative arguments against Koch's cholera theory having thus fallen through, it only remained for its supporters to prove the bacillus capable of causing cholera. Until within the last year, all attempts of this sort had invariably resulted in utter failure.

In 1884 Drs. Nicati and Reitsch established the fact that dogs and guinea-pigs, in whom cultures of comma bacilli had been injected into the duodenum, died with choleraic symptoms in many instances. Preliminary ligature of the bile ducts was at first practised, but afterwards discarded as being unnecessary and misleading. The result of these researches were fully corroborated by Babes, Watson Cheyne, and Koch.* The method, however, still had too many inherent fallacies to be of much practical use. Koch, therefore, resorted once more to his original method of feeding his animals with the bacilli. Out of 20 animals so experimented on 19 remained unaffected; one of them, which had aborted just before the feeding, died with all the symptoms of cholera—its evacuations and intestines contained enormous quantities of comma bacilli. Thinking that, perhaps, in the unsuccessful experiments the bacilli had passed too quickly through the small intestines, he became confirmed in this view after a number of carefully chosen experiments of feeding with small glass pellets, and cultures of easily recognized micro-organisms.

Koch, accordingly, performed his feeding experiments with the following precautions:—His guinea-pigs were starved 36 hours to remove excess of food from the stomach, and a small (℥iv) dose of a pure culture of comma bacillus was injected into the stomach through a catheter, being mixed with ℥i of a 5 per cent. solution of caustic soda, this being given simultaneously with an intra-abdominal injection of tincture of opium in the dose of ♏iiss for every ounce of the animal's weight.

This operation was followed by deep narcosis, lasting about one hour, when, after a few hours of apparently good health, the animal would rapidly develop marked symptoms of cholera, with purging, cramps, paralysis of the hinder extremities and collapse. At this autopsy congestion of the intestines was invariably found, with vast numbers of genuine comma bacilli in the intestinal contents and tissues. Out of 35 animals experimented on, 30 died in this manner.

* See minutes of second Cholera Conference held in Berlin May 1885.

By employing only one-third of one drop of cholera bouillon, seven died and seven recovered; and in using a still more minute quantity only seven died out of twenty-four.

In 85 successful innoculations, the clinical phenomena and post-mortem appearances were precisely similar in every case. Control experiments, differing only in the substitution of non-pathogeous bacteria (many of these organisms occurring in the mouth and intestines), for the comma bacillus produced no ill effects whatever.

The result of numerous experiments tried with antherax and other pathogenic bacteria are not yet published. Of many experiments conducted after this method with other bacilli supposed to be connected with cholera, the only case in which the conditions produced or much resembled cholera was in the case of Finkler's comma bacillus, found by him in cases of cholera morbus (an organism looking like Koch's but differing widely from it in physological character). This produced fatal diarrhœa and collapse in 20 per cent. of the cases experimented upon, but the post-mortem appearance differed from those of Koch's microbe in not producing any congestion of the intestines, while the symptoms also had not the same uniformly typical character. The "Naples" cholera bacillus, described by Dr. Emmerich of Munich, though producing a form of septic poisoning, is incapable of producing anything resembling true cholera.

A remarkable coincidence is the occurrence in one of the workers in Koch's course of instruction on culture of the comma bacillus of a sharp attack of apparently true cholera. In his stools many comma bacilli occurred, and a gelatine culture from this source is regarded by Koch as the gem of his collection.

While, therefore, nothing positive can be said in the absence of outside corroboration and the extension of experiments to clear up the doubtful points, still the large amount of direct proof,—of direct proof of the potency of a hitherto apparently inert organism—taken together with the failure to disprove its occurrence, or identity, and the absence of stronger proof in favor of any other agent, allows us to suppose that in

all probability the comma bacillus will prove the cause of Asiatic cholera,—and all must admit that for the discovery of these new and valuable methods and precautions for use in connection with bacterial experiments through the digestive system, the profession is deeply indebted to Dr. Koch. A point of great practical interest in connection with the subject, is the important *role* which opium plays in aiding the action of the cholera virus; and few practitioners would now be bold enough, in view of these new developments, to follow the time-honored custom of uniformly prescribing opium during the early stages of a suspected case of cholera.

THE INTERNATIONAL CONGRESS.

The prospects of the Washington Congress of 1887 do not appear to grow brighter, and the tone of the great medical weeklies of the eastern cities shows very plainly that there is still war between the adherents of the old and the new committees. It is a great misfortune that there does not seem to be any central executive of the Congress which could step in and say—Stop this unseemly quarrelling at once, or we shall go elsewhere! But apparently the meeting must take place in Washington or not at all. The latter alternative would be preferable if a reconciliation is not effected; for, if matters remain as they are, it will be impossible to organize the sections with men of sufficient reputation to command success. To attract the workers of other countries the sections must be controlled by the men most eminent in their respective departments, but the present officers of sections, with few exceptions, do not reach beyond a respectable mediocrity, and are men that we cannot regard as representative. If the Executive cannot secure the return of the leaders in thought and work, and fails to engage their hearty coöperation, but one thing remains to be done, and in the interests of the profession of the United States, it should be done soon—give it up. Better no Congress than a prolongation of this unseemly strife.

THE SMALLPOX.—The good effects expected from the energetic measures instituted by the Board of Health are, we are happy to be able to state, being already experienced. The new hospitals are ample for all the demand npon them. They are efficiently conducted, and command the public confidence. The members of the Provincial College in this city have undertaken the duty of making periodical inspections. Their reports, having been very favorable, have done much to remove prejudice and induce patients to submit to removal. Those permitted to remain at home are satisfactorily isolated and their houses guarded. The decrease in the mortality during the past three weeks has been most marked. The hope is fully entertained that the epidemic is controlled, and that by steady perseverance in the thorough measures at present in operation, its approaching end may soon be discerned.

—We took occasion a few weeks ago to notice Mr. Schäfer's new book, "The Essentials of Histology;" at that time the English edition only was in our hands. As this is a valuable book to all students and microscopists, we wish to say that we are now in receipt of the same work from the publishing house of Lea Brother & Co., Philadelphia, who have done full justice to it in the way of handsome typography and woodcuts.

Correspondence.

NOTES FROM OUR TORONTO CORRESPONDENT.

During the month of October, medical circles in Toronto have been particularly interested in the opening of our medical colleges—namely, the Toronto School of Medicine, Trinity Medical School, and the Women's Medical College, all of which commenced their sessions on Thursday, the 1st of October.

At the Toronto School of Medicine, the opening lecture was delivered by Dr. W. A. Ogden, and a conversazione was also held in the evening, at which were gathered a great many of the *élite* of Toronto to do honor to the occasion of opening the spacious new wing which has this year been erected as an addition to the school, and affords much valuable accommodation to

the large number of students assembled there to pursue their medical studies.

At Trinity Medical School, the opening lecture was delivered by Dr. Charles W. Covernton, the venerable Professor of Sanitary Science and the Institutes of Medicine. His lecture was a masterpiece, and the outcome of much study and thought; it contained valuable advice to the students, and touched largely upon hygiene and the recent and remote experiments of eminent scientific investigators. In the evening a conversazione was held, which was well patronized. It is somewhat to be regretted that the entertainments at both institutions should be held on the same evening, as the success of each entertainment might have been even better than it was.

The epidemic of smallpox in Montreal has struck terror into the inhabitants of Toronto, and vaccination has been booming during the past two months. People have been flocking in great number to the public vaccination stations and to the offices of private practitioners to get all the protection they can from the dreadful scourge.

At a meeting of the Toronto Medical Society, held November 19th, 1885, which was devoted to the exhibition of pathological specimens, Dr. Nevitt showed, for Dr. McPhedran, a mammary gland which the latter gentleman had just amputated for malignant disease. The disease involved the axillary glands and extended high up under the clavicle. All diseased tissue, as far as could be detected, was removed.

An interesting discussion ensued, in which Drs. Davidson, Newitt, Oldwright, Cameron and Grassett took part, dealing principally with chances of the operation when disease involves adjacent structures, and also as to the value of the by some much lauded clover tea in retarding the progress of the disease. The concensus of opinion, however, was rather against the utility of clover tea.

Dr. Nevitt also exhibited a very interesting specimen consisting of the stomach, duodenum, liver, and the great vessels in the region of these organs, with a blood tumor about the size of a medium-sized orange situated in the gastro-hepatic

omentum. The symptoms came on suddenly, and death soon followed, rendering little time for an ante-mortem investigation.

This somewhat unusual case gave rise to much discussion on tumors occurring in this region, which was participated in by Drs. Graham, Grassett, Cameron, Teskey, Oldwright and Davidson. The blood tumor was considered to be an aneurism, not of the aorta, but of one of the branches given off from it in the upper part of its course. The specimen was referred to the Pathological Committee to report on.

Dr. Grassett exhibited a portion of the jaw of a woman from the region of the canine tooth, which he had removed for the cure of an old standing neuralgia, followed with complete success. The bone was not diseased; the operation was performed as a *dernier ressort* and as an experiment. It is now a month since the operation was performed, and there has been no return of the neuralgia since. The portion of bone removed was about the size of a scarlet-runner bean.

On the 11th ult. Dr. Cassidy, the President of the Toronto Medical Society, entertained the members at supper. The viands were of the most *récherche* character. The usual toasts of the evening were proposed and responded to, and the evening was a most enjoyable one,—and I am sure every one present felt, if once in his life, that he had a perfect "feast of reason and a flow of soul."

It is very gratifying to announce the opening in Toronto, during the past few months, of a hospital for the treatment of diseases of women. The hospital, which is situated on the corner of Euclid avenue and Robinson street, was opened a few weeks ago by the Bishop of Toronto. The ceremony was attended by many of the most influential people in Toronto, evincing a very great interest in the welfare of the institution. The hospital is in connection with the Church of England Sisterhood of St. John the Divine, and may be said to have originated from a small dispensary which was carried on in the Sisters' Home by two medical gentlemen residing in the neighborhood. The internal economy of the hospital and the nursing of patients is conducted by the Sisters, under the supervision of the Mother

Superior, a lady in whom are combined many qualities which will foster the success of the institution. I cannot pass over the mention of her name without congratulating her upon the completion of the work and the large amount of success she has already achieved. It may here be added that the Mother Superior was appointed to the head of the nursing staff of the Moosə-Jaw Hospital, N.W.T., during the late rebellion, which added much to her experience in the nursing of the sick and wounded. The hospital contains about twelve beds; four of these are free, and are for patients whose means will not permit of them paying anything for their care or maintenance. The other beds range in price from three to fifteen dollars per week, according to location, etc. The hospital is so constituted that the regular practitioner can bring his patients to a private ward and have their treatment entirely in his own hands. The satisfaction that several practitioners have already had in conducting the treatment of their cases in this institution augurs well for its success. The medical staff is composed of Drs. Machell, Davidson, Berrus and Johnston, who are in attendance at the hospital for a period of two weeks in rotation. They undertake the treatment of those patients who have no regular medical attendant. The hospital is small, yet great things have often small beginnings; but for sanitary conditions and good appointments, it would be hard to find its superior.

Obituary.

Dr. W. B. Carpenter, the great English phpsiologist and scientist, is dead. It is painful to relate that this amiable gentleman and truly great man came to a suffering and tragic end. Whilst taking a hot-air bath, the lamp was accidentally overturned and the ignited spirits produced fatal burns. It is a token of the universal esteem in which Dr. Carpenter was held in every country, that we find in so many of the notices of his death the words, "the world is all the better for his having lived"—the best eulogy that can be pronounced over the grave of mortal man. Many will recall with pleasure Dr. Carpenter's last visit to this city, his kindly and instructive address, his deep interest in the progress of scientific medicine

in this country, and his active encouragement of all philanthropic schemes. He was brother to the late Dr. P. P. Carpenter, whose great services on behalf of sanitary reform in the city of Montreal are by no means yet forgotten. Would that there were more like him!

M. Charles Robin, the eminent histologist, died last month at the age of 64. Since 1852 he has been Professor of Histology at the Faculty of Medicine, and since 1875 was one of the senators for Aix, and by his death the French Senate loses almost its only scientific man.

Medical Items.

—John L. Shibley, M.D., McGill, '85, is practising at Los Angelos, Cal.

—D. J. G. Wishart, M.D., McGill, '85, has recently passed for licentiate before the Royal College of Physicians.

—Oscar J. McCully, M.D., McGill, '79, passed recently the examination for the membership before the Royal College of Surgeons, England.

—Dr. Graves, in the Chicago *Medical Times* for September, 1885, alleges that the painting of the gums at intervals of half an hour with a 4 per cent. solution of cocaine arrests the diarrhœa of children, where this is due to irritation from teething. We have grave doubts about the truth of this assertion. It is in our opinion a piece of bad observation, which will go to swell the immense heaps of forgotten nothingnesses.

Montreal Turkish Baths.—The great value of the well-directed use of Turkish baths in many diseases is well known, but as a therapeutic measure they are not resorted to as often as they should be. We have in Montreal, thanks to the energy of Dr. McBean, one of the most complete and luxurious set of baths on this continent.

Maltopepsyn.—Since the introduction of Maltopepsyn into the Dominion of Canada, its rapid and increasing demand, arising entirely through the support of the medical profession, until it now stands at the head of all remedies of its kind, proves conclusively its intrinsic merit and superiority of formula over all other digestive remedies. This is still further attested to by the signatures of nearly all the leading physicians of Canada, and the fact that it has met with the support of the profession in England, and is gaining a large sale throughout Great Britain. Maltopepsyn is invaluable as a specific for infants' troubles during the summer months, such as cholera infantum, etc.

CANADA

MEDICAL & SURGICAL JOURNAL

JANUARY, 1886.

Original Communications.

INNERVATION OF THE HEART OF THE SLIDER TERRAPIN (PSEUDEMYS RUGOSA).

(Continued.)

By T. WESLEY MILLS, M.A., M.D., L.R.C.P., Eng.
Lecturer on Physiology, McGill University.

One of the greatest results of the new heart physiology has been the fresh light thrown on the functions of the vagus nerve. Formerly the vagus was regarded as the motor nerve of the heart, and as acting chiefly as a controller or inhibitor. This view must, in the light of the most recent investigations, now be modified. Before discussing the mode of action of the pneumogastric, a few well-established facts may be stated.

Both Gaskell and Heidenhain have shown that primary acceleration of the rhythm of the heart is a frequent result of stimulation of the vagus in the *frog*. The former observer states that he has in no case seen this effect in the *land tortoise*. Though I have myself often looked for it in the *slider terrapin*, and tried by varying the strength of the stimulating current to produce it, I have seen it in but one case; in that case, however, the acceleration was very marked.

Here, then, is at once new light; the vagus may not as a first effect slow but accelerate the heart-beat. One of the best marked results of vagus stimulation noted among a large number of cold-blooded animals now examined by myself and others is *after-acceleration* of the cardiac rhythm. So far as my own prolonged

investigations of this subject in the terrapin go, the following statements may be made; and as this subject seems to me of the utmost importance to medicine, I shall give the results very much in the words of my original paper :—

1. "*The action of the heart being slow, the acceleration is very marked; if rapid, it may be slight or wholly wanting. It follows the same laws in this respect, in fact, as the accelerating sympathetic—i.e., the degree of acceleration is inversely as the rhythm at the moment of stimulation.*"

2. "*The after acceleration always lasts a considerable time, and in some cases a very long period.*"

3. "*The heart being feeble, and its nutrition suffering, vagus stimulation then produces its most marked effects on both rate and force of beat, but especially on the latter.*"

4. "*Stimulation of the vagus removes peculiarities of rhythmic sequence.*"

5. "*Stimulation of the vagus gives rise to increased diastolic relaxation.*" This refers to the effect during actual stimulation; it is never a genuine after-effect, though it may for a few seconds outlast the stimulation.

As a primary effect of stimulation, must be noted also: (*a*) Weakening of the cardiac pulsations without alteration of the rate of beat; (*b*) A similar weakening or slowing, or both, *prior* to actual stand-still.

Eichorst and Zander had noted degenerative changes in the heart after section of both vagi. Traube had also pointed to isolated facts of similar import, and with a fine insight read their meaning in the dim light of his day.

Gaskell and Heidenhain, whose work was published about the same time, had, though with different explanations, pronounced the vagus the *trophic* nerve of heart.

Ransom has furnished unmistakeable evidence for the truth of such a view as applied to the cephalopod mollusk, *Octopus.*

In my own experiments on the chelonians, the heart has been studied in all conditions of nutrition—most of the cases being kept under observation for two and often for three days; these observations have also been extended to the fish and the alli-

gator. Such study has enabled me to formulate the laws of vagus action with a completeness not previously possible, and especially that important law of *inverse proportion*, as I have called it, viz., *that the after-effect of vagus stimulation is inversely proportionate to the rate and force of the beat at the time of stimulation.* It follows that the worse the condition of the heart, and the more it needs assistance, the greater the capacity of the nervous system to render that help. This fact, which was never clearly brought out prior to my own investigations, has led me to assert, in the previous part of this paper, that I believed that our present explanations of the causes of heart diseases are too mechanical; and that the above facts—for facts they are and not theories—will, in the future, modify both our cardiac pathology and therapeutics.

The question as to *how* the vagus acts is very difficult, and one that cannot be fully answered until still more numerous observations have been accumulated.

Gaskell's views as to the mode of action of the ganglia in the heart-substance of the frog and land tortoise have been quoted in the first instalment of this paper; but since Gaskell wrote, certain facts have come to light which must render a modification of his views necessary.

Most remarkable was Ransom's discovery after very careful microscopic examination, that in the heart-substance of the highest class of mollusks there were *no* ganglion cells, while at the same time the vagus ("visceral") nerves had in the most remarkable manner a beneficial influence on heart work and heart nutrition. It seems to me it is difficult to over-estimate the value at the present time of such work as is now being done in this realm of comparative physiology. It is now clearly shown that ganglia are not, in all animals, essential to heart action or heart nutrition. We are led to enquire: Are they essential in the higher animals—are they so in mammals? The work for the mammalian heart is still to be done in great part; but in Ludwig's laboratory, Tigerstedt has, by one investigation, rendered it very doubtful that the movements of the heart are, even in mammals, absolutely dependent for their origin on nervous structures at all.

Does the vagus nerve act directly on the heart muscle, or mediately through its nervous ganglia? Certainly Ransom has answered this question in favor of the former view, so far as the mollusks are concerned. How is it as to the frog, the chelonians, the fish, etc. Although I hold the view subject to correction by further observations, it seems to me that the evidence that the vagus in the animals specially examined by me (the chelonians, the alligator, and the fish) acts, or at least may act, *directly* on the heart muscle itself to produce those effects characteristic of the nerve. The evidence on which this opinion is based will be clearer after the consideration of my publication on the heart of the fish especially, some account of which will probably appear in this JOURNAL.

Another question much debated for the past fifteen years is: Does the vagus contain two sets of fibres with antagonistic influence—the one *depressors* of cardiac action and the other *augmentors;* or do the same fibres act at one time as augmentors and under different circumstances as depressors? This question, so far as the frog is concerned, has been settled in favor of the former view by Gaskell, though I have shown that this investigator is in error in supposing that the vagus nerve is a pure depressor in the *crocodilia.* Whether the vagus may not be such in certain animals requires further investigation; but it seems to be tolerably safe to assert that in all animals above fishes the vagus contains both depressor and augmentor fibres. At the same time, this has not been positively demonstrated for all; and among the other lessons taught us by these recent cardiac investigations is the danger of too wide generalization, and the desirability of subjecting as many animals as possible, even of closely allied structure, to examination.

It has been shown that similarity of anatomical structure is, in a general way, associated with similarity of function; but this is not invariably the case, and we have learned of not a few instances of "physiological isolation." To some of these I shall have to refer in later papers.

Prior to my own investigations on the chelonians, and those of McWilliam and myself on the fish, carried on at the same time, though independently, very little was known of *reflex*

cardiac inhibition among cold-blooded animals, except what was brought out by the researches of Goltz on the frog.

The case for the Slider Terrapin was tested in twelve specimens. The following forms of stimulation were employed:— 1. Injury due to removal of plastron, etc. 2. Electric stimulation of the brachial plexus and sciatic nerve with the rapidly interrupted current. 3. The same sort of stimulation applied to the main sympathetic stem in the upper thoracic region. 4. The same applied to the viscera. 5. Sponging over the peritoneum and muscles. 6. A stream of cold water over the peritoneum. 7. Goltz's "Klopf-Versuch" (tap) over peritoneum, especially in the region of the bladder. 8. A pushing-down force with the end of the wooden handle of a seeker, in the same region as that noted in 7.

Without giving details in each case, the results may be thus stated: A stream of cold water allowed to flow over the lower part of the peritoneum, and injury from operative procedure have almost always been followed by more or less cardiac inhibition, frequently lasting for many minutes (often complete stand-still of the heart for a shorter period). The relatively greater effect of such forms of stimulation, as sponging over the peritoneum, as compared with electric stimulation, even with such stimulation of the great nerves, is very striking.

Stimulation of the main sympathetic, in the thoracic region, has produced more decided effects than corresponding stimulation of the brachial plexus, etc. In some cases the latter had not the slightest effect. Electric stimulation of the viscera has generally produced little effect.

When trying the "Klopf-Versuch" (abdominal tap), I was forcibly reminded of what Prof. Goltz had told me when explaining his own method of performing this experiment on the frog, that there is the greatest difference in individual frogs of the same species as to susceptibility to reflex inhibition. That this applies to all the chelonians, my experiments abundantly show. To get the above results, the cardio-inhibitory centre in the medulla and the vagi must, of course, be intact. The afferent nerves are numerous, doubtless.

There are a number of other points connected with the pneu-

mogastric nerves, the depressor nerve of the heart, the sympathetic nerves, and especially with the great question of independent rhythmic capacity of the different parts of the heart, which must be deferred for comparison, in a later communication, with results obtained by the investigation of the heart of the sea-turtle and other chelonians.

ON CEREBRAL SYPHILIS.

By GEORGE ROSS, A.M., M.D.,
Prof. Clinical Medicine, McGill University; Physican to the Montreal General Hospital, &c.

(Read before the Medico-Chirurgical Society of Montreal.)

Some cases having recently come under my care illustrating different phases of this disorder, I venture to bring them before this Society, with a few remarks which they have suggested.

The older writers used to ascribe a great variety of disorders of the nervous system to constitutional syphilis: vertigo, epilepsy, apoplexy, amaurosis, etc. They had, of course, no scientific foundation for so doing, but really made a kind of scapegoat of this protean malady in order to explain what was otherwise obscure. Later on, came those who declared that syphilis never attacks the brain or other nervous centres. The investigations of our modern pathologists have, of course, settled this matter, showing that these important organs may, and often do, become the seat of syphilitic disorders. They have also shown in what various ways the different structures entering into the composition of these organs may be subjected to pathological changes, the direct result of syphilitic contamination. They have shown that symptoms of present disorder may be induced by local inflammation of a specific nature, by the invasion of a neoplasm or special new growth, by softening due to the obstruction of diseased vessels, by the interference of a tertiary swelling of the periosteum, or as a result of constitutional disease of the bones themselves. It has been thought, too, that symptoms of cerebral syphilis may be observed whilst the autopsy shows no special changes in the brain. In some such cases, however, careful and experienced observers have shown that histological changes of a sufficiently important character have been slowly developed as a

result of the general poison. As these various facts have been substantiated, more and more of the cases of disease of the nervous centres became traceable to a previous infection of the system with syphilis. On most of these points there is a universal consensus of opinion, and in the writings of many eminent neurologists in England, Germany and elsewhere we find abundant teaching upon the main features of syphilis of the cerebro-spinal axis. The great variety in the grouping of symptoms—the strikingly different disease-pictures which may be presented—the diagnostic difficulties often met with—the great practical importance of the cases—have all combined to render the field of brain-syphilis a peculiarly attractive one to clinicians and pathologists. Indeed, the doubt which still overlays the etiology of many of the commoner chronic nervous diseases leaves ample scope for further investigation. In the case of tabes dorsalis, *e.g.*, in spite of all the attention bestowed upon the subject, it is still a moot point whether or not it should be looked upon as usually of syphilitic origin. The importance of determining, as far as possible, the relationship of any of these nervous disorders to syphilis cannot be overrated. Take the case, for instance, of the disease I have just alluded to. Last winter, a hospital patient came before me with an exaggerated ataxia which I have seldom seen surpassed, together with the usual accompanying changes in sensory conditions, reflexes, etc. A suspicion of syphilis was entertained, especially from the existence of certain local symptoms in the spine pointing to an affection of the bony canal. Under anti-syphilitic treatment this very unpromising case, to the surprise of many, made a rapid recovery. Some years ago a gentleman consulted me for a severe eruption upon the face, for which he had sought relief for twelve months without success. It annoyed him extremely, being very unsightly, and was accompanied by almost continuous insomnia, so that he walked the streets at night, became despondent, and came very near committing suicide. I failed entirely to get any history or any corroboration of syphilis, but was convinced that the cutaneous affection was of this nature, prescribed accordingly, and had the satisfaction of seeing him free from his tormentor.

A year or more after, he had an occasional epileptic fit (he had not, I may say, followed his treatment with regularity). I strengthened the dose. But, after a time, he became irritable, irascible, and fractious, showed weakness in the legs, lost his capacity for business, and suffered from pain in the head. Finally he lay in bed and became, from stupid, comatose—deeply so—and his death was hourly expected. Now, besides observation of the symptoms I have mentioned, and which, taken together, were highly significant, I had the important clue of the previous cure of the eruption by mercury. Without this, evidence of past syphilis would have been, by any one a stranger to the case, set down as absolutely wanting. I maintained that this comatose man would get well: and was laughed to scorn. But I insisted on pouring in all the iodide of potash I could—and he did get well. His friends who sat up several nights to close his eyes call him to this day "the resurrection man." Now, actual cases of this kind cannot fail to make a great impression upon a thinking man when coming under his own observation. The recognition of the underlying cause of the phenomena observed is absolutely essential for the institution of a successful treatment. There are, perhaps, no cases you can think of in which the issue of life or death hangs more directly upon the action or inaction of the physician in charge. The severer forms of cerebral disturbance often immediately threaten life, and, except promptly treated, will inevitably prove fatal. They are with great certainty met by the recognized remedies for the syphilitic disorders: and all other therapeutic efforts, without these, will prove totally ineffective. Every one knows the difficulty of determining, in many cases, whether the individual have suffered from constitutional disorder or not. On the other hand, the history may be clear, or careful scrutiny for remaining traces may give unmistakeable evidence; in which case our path is rendered easy. The fact seems universally admitted, and it quite coincides with my own limited experience, that persons who suffer from late-developed syphilis of the nervous centres are extremely likely to give no account of the well-defined secondary symptoms which are so common; at times, even, are

not aware that they have ever had any secondary symptoms. So important, in nervous cases, is the treatment, that the practice of giving a full course of potash as a test is highly recommended, and should be adopted in every case presenting the slightest element of doubt. Many such cases will arise, for the reason that although the concurrence of various symptoms and circumstances renders easy now and then a correct diagnosis of the syphilitic origin of a nerve-disorder, even without the help of the patient's history, yet there are no pathognomonic signs as yet definitely ascertained which will point conclusively, without the aid of the history, to the specific nature of the case. More dependence is to be placed upon the grouping together of various symptoms than upon any individual symptom. Take, for instance, Epilepsy. Many cases of general convulsions resemble, in almost every respect, what is called "Essential Epilepsy," and yet are due to constitutional taint. They cannot always be diagnosed as such. Then, the therapeutic test alone will often determine the question. If specific, bromides fail and iodide succeeds. But in other cases of epileptic character, certain other symptoms may be so associated with the convulsive attacks as to point the observer in the right direction. Dr. Buzzard says "there is frequently a history of antecedent pain in the head for months before the first fit." This is no part of the simple form. It was characteristically present, together with paresis of the limbs of one side, in the following case:—

CASE OF CEREBRAL SYPHILIS—PERSISTENT HEADACHE—REPEATED EPILEPTIC ATTACKS—RAPID CURE UNDER MERCURIAL INUNCTIONS.

J. C., æt. 30, single, admitted to hospital Oct. 8, '85, suffering from severe headache, and having recently had some epileptic fits. The first attack of this kind occurred on the 13th Sept. On that day he was seized with a sudden feeling of numbness, shooting rapidly up the right leg as far as the knee: the leg became cold and almost powerless. He stayed in bed the remainder of the day, trying to rub some life into the affected limb. Next day returned to work, but the leg felt heavy and inclined to drag. On the 20th, the right arm felt heavy and tired. By the 25th, this arm was useless, cold, and somewhat anæsthetic.

Had medical advice, and under treatment improved so much that the affected arm seemed as good as the sound one. On the 30th, whilst bathing his leg, he experienced in the calf a severe cramp which bent the leg upon the thigh ; stooping to take hold of it, suddenly his whole body was seized with clonic convulsive movements. Thinks he did not lose consciousness at all. Had two more fits on the 6th October. He had remained at his work up to this time, and came to the hospital on the 8th Oct. On making further inquiries, it was learned that three years ago he contracted syphilis ; fifteen months ago had alopecia and severe iritis of both eyes. He has during all this time suffered from pain in the head, sometimes very severe, and always with nocturnal exacerbations. The iritis was actively treated at the ophthalmic clinic. He says that he has been taking medicine of some kind more or less continuously since the trouble began. On admission, there is partial loss of power of right arm and leg, dizziness, a " numb shooting " pain on the left side of the head, deafness and tinnitus in the left ear. He is a strong, well-built man. Face symmetrical, conjunctivæ congested, especially the left. Pupils act well. In walking, the right foot shows a slight want of firmness, but there is no dragging. Grasp of right hand feeble as compared with the left. No optic neuritis or other change in the fundus oculi. Other organs normal.

On the 12th he had three fits, two in the morning and one whilst I was examining him before the clinical class. He suddenly exclaimed " I'm off," and had a very severe epileptic fit. The diagnosis was " cerebral syphilis," probably in the superficial portion of the left hemisphere, and in a stage of active progress. He was therefore ordered to be brought rapidly under the influence of mercury by means of inunction.

The pain in his head soon began to show signs of diminishing in severity. On the 15th, had the aura or premonitory cramp in the right leg, but by having this firmly grasped, the impending fit was averted. On the 17th, at midnight, another severe fit, and this was followed by a succession of four more, at intervals of a few hours until the afternoon of the 18th. There had been very severe pain in the head for a short time before this attack. The same day (17th) the " mouth and gums were sore," and the next day the mercurial ointment was omitted. Sharp salivation continued for the following week. He was (18th)

ordered iodide of potash, beginning with eight grains and increasing one grain every day till he should take thirty. Improvement was steady and continuous; headache was rapidly removed; had no more fits, though he occasionally had an odd sensation in the leg, which made him afraid he was going to have one; power returned in the right hand and his gait was firm. He was about the ward on the 2nd November, feeling very well, and was discharged on the 28th, still taking ʒiss of iodide daily, and with directions to continue the treatment and report himself at intervals for the next three months.

Here, the history was unmistakeable, the attacks were recent, full treatment had not yet been tried, and the prognosis was most favorable. The result showed that this was fully justified. It is doubtful if, in this case, it is possible to locate the seat of the disorder. I have thought it is probably situated upon the convex surface of the left hemisphere. But, according to Hughlings Jackson, "the convulsion points simply to disease of some kind, not to any particular pathological change of, or in the side of, the brain opposite to that in which the spasm sets in."

Two remaining cases, of which, if you will allow me, I will present a few notes, illustrate, in the one, a sudden hemiplegia, and in the other certain very obscure peripheral and mental symptoms, which it was thought could hardly be explained, except from specific disease.

CASE OF CEREBRAL SYPHILIS—PROLONGED PAIN IN THE HEAD—SUDDEN LEFT-SIDED HEMIPLEGIA—IMPROVEMENT.

J. O., æt. 40, was admitted 25th October, '85, suffering from complete paralysis of the left side and a severe pain in the right side of the head. Patient is an old soldier, who has had ague and fevers in the East. Ten years ago he was knocked down by a blow from the butt-end of a gun; was stunned for a few minutes, and was confined to bed for four days. Suffered no ill effects subsequently. There is a scar, but no evidence of fracture, at the seat of injury. Seven months ago he was inoculated with syphilis, for which he had some treatment, still presenting numerous brown stains upon the limbs and decided enlargement of glands in groins and neck, and at elbows. About three weeks ago began to suffer from pain in the right side of

the head, especially the temple, which was severe, and frequently kept him awake all night. On the 20th Oct., got out of bed and on his way to the closet dropped suddenly to the floor. Says he did not lose consciousness. Was carried back to bed, quite unable to move his left arm or leg. Speech was affected, and the tongue felt thick. On examination—Paresis of left facial muscles; tongue protruded slightly to the right. Complete motor paralysis, with flaccidity of the left limbs. Sensation impaired. Superficial reflexes on that side diminished. No change in optic discs and fundus. No enlargement of spleen. Heart normal. Urine contains neither albumen nor sugar. Was ordered Hydrarg. Protiodid. gr. ¼ and Potass. Iodid. gr. x ter die. Pain in head continued, with insomnia, for some days, but then gradually gave way, and by the 19th Nov. is reported quite absent, since which there has been no return. Incontinence of fæces was a troublesome symptom during the first two weeks. His mental condition at first was very uncertain, wandering a little at times, and inclined to ask silly questions. He is now quite rational. The motor power has been slowly, but steadily, returning. He can move the leg about, and flex it in bed quite freely, but cannot yet stand upon it. He also begins to move the arm. He remains under treatment.

A recognized peculiarity of sudden hemiplegia from syphilis is that there is no loss of consciousness: the patient feels giddy, perhaps, and on attempting to rise finds that he is paralyzed. It is not, however, confined to syphilis, and cannot be relied upon as diagnostic. The antecedent continuous head pain, the degree of mental disturbance and the incontinence of fæces (which seemed rather mental than from organic lesion), and the improvement under specific treatment, have seemed to justify the diagnosis. If correct, it will be remarked that the case is an example of involvement of the brain at a very early stage, seven months after infection, for it is admittedly rare to meet with this until at least one year has elapsed, and, indeed, generally several years.

SENSORY DISTURBANCES—LETHARGY—MENTAL IMPAIRMENT—DEFECT OF SPEECH.

R. C., æt. 36, admitted 7th November, '85, complaining of numbness of the right side and difficulty of speech. On the 3rd January, 1883, patient had a sudden attack of smothering

or choking, lasting half an hour, during which time he could not speak distinctly, but only mutter. Nothing further happened until last January, when one day, at work, suddenly felt numbness in the right hand, which crept up the arm and side of the face, and in the right leg to the knee ; had to drop his tools ; the fingers of the right hand became flexed, but he could force them to open. Numbness and spasm continued for a quarter of an hour, and then completely disappeared. Was able to walk home immediately after, when it was noticed that his speech was very indistinct. There was no headache, vomiting or feverishness. He continued to work even up to a short time before his admission, but his friends soon noticed that his mental and general physical condition were much changed. He became dull, slow of speech, and somewhat stupid. Having been a good tradesman, he could not perform the work given him in a proper way, and was discharged from one shop after another, protesting all the time that he was quite well and capable. His memory failed a good deal. During the summer he had repeated attacks of the kind already described. His wife says that he would come home after one of these quite dazed and dull, could hardly speak at all, and would go to bed. Would sleep a great deal for the next twenty-four hours, rising only to take food, and saying a few words in a heavy, thick fashion. This would pass off and he would return to work. On examination, good physique, medium height, good intelligence, a slow, hesitating and deliberate mode of speaking, which he says began with the first attack. Says he does not suffer in any way ; has nothing the matter, except that he is afraid of the attacks coming on. There is good motor power in all the limbs, and sensation is intact. Thoracic and abdominal viscera appear normal. Examination of eyes negative. On searching for evidences of syphilis, nothing could be determined beyond the occurrence of gonorrhœa twenty years ago. No traces of the constitutional disorder could be detected. He was given gr. 1-12 Bichloride of Mercury three times daily. Remained in hospital two weeks, and was, at his his own request, discharged, without any material change in his condition, and no definite numb-attack having occurred in the meantime.

In this case, the slow, deliberate speech is like that from multiple sclerosis, but there is no tremor, and the attacks have never been of the apoplectiform character which belongs to the latter. There is no optic neuritis or other sign of brain tumor.

TWO CASES OF GUNSHOT WOUND OF THE TESTICLE.

By JAMES BELL, M.D.,

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(*Read before the Medico-Chirurgical Society of Montreal.*)

Case I.—W. B., æt. 28, a tall, muscular fellow belonging to the Midland Regiment, was struck by a rifle bullet in the skirmish which immediately preceded the final charge and rout of the rebels at Batoche on the 12th of May last. He was on the very bank of the river when the bullet struck him on the outer side of the left thigh, just below and behind the great trochanter and opposite the end of the natal fold. He was tumbled over the precipitous bank, and was with some difficulty secured and brought into the zareba, where the hospital staff were by this time pretty actively engaged. When undressed, it was discovered that the bullet had passed through the thigh, re-entered the perineum through the base of the scrotum, behind the left testicle, and thence made its exit through the body of the right testicle, making a large rent in the scrotum and tunica vaginalis. The testicle was carried completely out of the scrotum, and at the point of exit of the bullet a fringe of frayed and lacerated glandular structure protruded beyond the visceral layer of the tunic. This fringe of lacerated tissue I removed with sharp scissors, and after removing several pieces of cloth from the track of the bullet, and cleansing the sac with weak carbolic lotion, I returned the organ to the scrotum, and closed the scrotal wound with catgut sutures, leaving a capillary drain beneath. There was no hemorrhage or other troublesome symptom, and the wounds were dressed with carbolized gauze and iodoform. The patient felt comfortable after being dressed, and next day was put on board the steamer "Northcote" with the other wounded men, and sent up the river to Saskatoon in charge of Assistant-Surgeon Wright and a dresser. On arriving at Saskatoon he was found to be suffering from urinary infiltration. Extensive sloughing occurred, and his life hung in the balance for days,

but the scrotal wound never reopened, although most of the left side of the scrotum sloughed away. (The bullet had evidently wounded the urethra in passing through the perineum.) As the wound through the thigh began to heal, he suffered severely from pain, of a burning and tingling character, in the sole of the foot and shooting pains along the course of the great sciatic nerve and its branches. This and the large granulating surfaces left after the sloughing of the skin and cellular tissue made his convalescence slow, and he was brought down the river on the hospital barge with the last of the wounded, and arrived in Winnipeg on the 15th of July. By this time his wounds were all perfectly healed, although he was still suffering from the sciatic neuralgia. The right testicle was now about half its original size, firm, free from pain or tenderness, and freely movable in the scrotum. This case presents points of interest, apart from the wound of the testicle ; but what I wish particularly to call attention to is the recovery of the testicle from a very severe wound and great loss of its substance.

Case II.—J. D., æt. 32, a French half-breed, a powerful, muscular and ruffianly-looking fellow, was one of several rebels —half-breeds and Indians—who were picked up on the battlefield at Batoche on the night of the 12th of May, severely wounded, and brought to our camp for treatment. He had a large contused and lacerated wound, about two inches in diameter, entering on the posterior and outer aspect of the left thigh, just below the great trochanter, and passing forwards, upwards and inwards, partially separating the adductor longus muscle at its origin. There were also several irregular superficial wounds about the buttock and left side. The left testicle was completely carried away, as well as the whole lower two-thirds of the scrotum. The right testicle hung down uncovered, and in its lower half was filled with fragments of metal. (The wounds were thought to have been produced by the bursting of a shell, the large wound being caused by a rough irregular fragment of metal passing through the thigh.) In the morning the shreds of the left testicle were removed, and his wounds cleansed and

carefully dressed, and he, with another rebel (Jobin, who subsequently died), was sent up to Saskatoon on the steamer, along with our own wounded. He had severe constitutional symptoms for a few days—fever, delirium, etc.—but these soon passed away. The right testicle was not subjected to any operative treatment, but was treated expectantly, and in a few days the lower half of the testicle sloughed off, leaving an irregular granulating surface. The other wounds progressed favorably, and as there was no possibility of this portion of the testicle being covered by the natural processes unaided, I had the patient anæsthetized, loosened up the skin of the scrotum remaining, pared its edges, and covered in the testicle. The result was extremely satisfactory, and in a few weeks before the wounds in the leg had healed, the scrotum had completely united, and the remaining portion of testicle could be felt firm and painless within it, and apparently attached to the cicatrix at the base. In the latter part of June, all his wounds having healed, he was sent off to Regina to stand his trial, as he was an important State prisoner.

The success attending the expectant treatment of these two cases has led me to think that hardly any laceration of the testicle can be, in itself, so severe as to necessitate castration, although, from what I have been able to gather on the subject from the literature within my reach, immediate removal of the organ is recommended in severe injuries by most authors. All authors agree that the injured testicle usually atrophies, and is sometimes the seat of neuralgic pain, so that in point of usefulness it might as well be removed at once. Patients, as a rule, however, prefer not to have the organ removed if it can possibly be saved, and from the statistics given in the surgical history of the American war, the expectant treatment seems to have been safer than active operative treatment; 586 cases are reported, nearly all of which were complicated. The testicle was extirpated in 61 cases (and from the reports of the cases some of the testicles removed were not very severely injured), 18 per cent. of these cases died, while of the remainder only 11.9 per cent. died. Matthew, in the surgical history of the British army in

the Crimea, reports four cases treated expectantly; all healed, but atrophied later on. Heman (Principles of Military Surgery) says that even when fungous protrusion of the substance of the testicle occurs, clipping off of the fungous portion is all that is necessary to secure healing.

CLINICAL NOTES ON "CHOREA LARYNGIS."

WITH CASE RECORD.

By GEO. W. MAJOR, B.A., M.D.,

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Laryngeal chorea, recognized as such, is of comparatively rare occurrence. It is within the limits of possibility, however, that a small percentage of all cases of spasmodic cough occurring in persons of neurotic habit is of a choreic nature, and that if the act of coughing were investigated laryngoscopically, more numerous instances of this affection would be recorded. An uncontrollable desire to cough, especially if of a barking character, when developed in a person the subject of chorea, should at once suggest its probable nature.

In forming an opinion, it is essential that the hysterical element should be carefully excluded, a task not very easily accomplished, as one condition frequently coexists with the other.

A typical case of laryngeal chorea may be defined to be one in which there is an involuntary and uncontrollable cough during waking hours, absent during sleep, spasmodic in character and accompanied by various sounds resembling the noise produced when straining, the barking of a dog, and so forth. There is associated with it spasm of the expiratory muscles of the chest and abdomen. The speaking voice is normal, articulation is perfect, and the general health usually good.

On laryngoscopic examination, which is generally well borne, the act of coughing is found to be preceded by spasm of the laryngeal adductor muscles bringing the vocal cords into close relation, often with an audible click, when the action of the ex-

piratory muscles suddenly forces them apart, producing the somewhat characteristic cough. Between the acts of coughing the glottis assumes a variety of shapes, constantly changing its outline, indicating choreic movements of the intrinsic laryngeal muscles. The larynx itself presents but slight departure from a state of health, if we except trifling congestion of its mucous membrane, and occasionally, perhaps, a moderate degree of swelling.

Under the designation of chorea laryngis a number of cases have been improperly described, as, for example, those in which the expiratory muscles of the abdomen, or of the chest and abdomen, have alone been affected, producing a spasmodic cough, it is true, but in which no laryngeal evidence of chorea was obtainable. Strictly speaking, the term should be confined to those in which we find by direct inspection motor implication of the intrinsic muscles of the larynx, whether accompanied by spasm of the muscles of expiration or not. In other words, the diagnosis of chorea of the larynx should depend upon recognized choreic movements of the laryngeal muscles, and the existence of a general chorea preceding, accompanying or following the laryngeal motor neurosis should strengthen and fortify rather than detract from the accuracy of our diagnosis. In the absence of spasm of the expiratory muscles, one must be prepared to make a diagnosis without the assistance of cough as a symptom. Such cases are, however, exceedingly rare, as the whole range of medical literature furnishes but one (Knight's) solitary instance.

For the better illustration of this uncommon neurosis there is appended a short clinical report of a case which recently came under observation, a perusal of which may be found interesting:

Mlle. R., a healthy-looking young lady of sixteen, was seen in consultation with her medical attendant, Dr. Proulx, on Oct. 27, '85. She was suffering from a cough of a barking character, which was not only a source of discomfort to herself, but of great annoyance to her family. The cough, which had already lasted two months, occurred at regular intervals of three or four minutes and was entirely absent during sleep. All the ordinary remedies, local and constitutional, had already been resorted to with-

out perceptible improvement. On critical observation the cough was found to be explosive as well as barking, and was followed by a decidedly laryngeal sound resembling that of œdematous laryngitis. The young lady complained of some slight distress of breathing when recumbent. All attempts on the part of the patient to control the cough were unavailing. Articulation was perfect, and at the time of the consultation there was an absence of symptoms of hysteria, general chorea, or other nervous affection.

On making an examination of the larynx—a matter, by the way, of easy accomplishment—moderate congestion of the lining mucous membrane, especially in the neighborhood of the arytenoid cartilages, was found. The vocal cords, though not of normal pearly lustre, were not hyperæmic.

The act of coughing was observed with the mirror, and presented the following features: The vocal cords were first thrown into violent contact, and after so remaining for a few seconds were as abruptly forced apart, when the cough took place. During the act, the spasm of the adductors never thoroughly relaxed, but varied in degree. The laryngeal sound which followed closely in the wake of the first respiratory effort may thus be accounted for. Spasmodic action of the abdominal expiratory muscles coexisted. In the intervals between the acts of coughing the glottic space presented a varied configuration, without, however, in any way interfering with the function of healthy respiration. Throughout this kaleidoscopic period of glottic images there predominated in a marked degree the well-known outline of double thyro-arytenoid paralysis, with paresis of the arytenoideus. This latter condition may have had no direct connection with the neurosis, and probably had not, but was more likely a secondary result of continued strain and fatigue extending over a long period of unnatural activity.

Laryngeal chorea was diagnosed. On expressing this opinion, Dr. Proulx cordially endorsed it, and in support of it stated that preceding the stage of cough there had existed a well defined more or less general chorea, which necessitated the withdrawal

of the young lady from the convent school at which she was a pupil.

On December 4th, in reply to a letter of inquiry concerning the progress of the case, the doctor reported decided improvement under the use of liquor arsenicalis, supplemented occasionally by valerianate of zinc. There had been a gain in weight and an improvement in appetite. The cough also showed decided amelioration. Altogether, he considered the patient as speedily convalescing.

Laryngeal sprays of cocaïne did not afford any relief—as good an argument in favor of the neurosis of motion theory of chorea laryngis as it is against the theory of reflex action from laryngeal hyperæsthesia.

The foregoing clinical history is most instructive, as it groups in a very complete manner the characteristic, though not always constant, features of chorea of the larynx—a condition the recognition of which is extremely important, as it may exist independently of any other choreic symptom. The treatment of this disease must be carried out on the general principles found useful in controlling chorea in other organs. Works on General Medicine do not treat of this local manifestation of chorea, nor, indeed, do the authors of standard publications on Diseases of the Nose and Throat. For information on this obscure phenomenon we are dependent upon rather less than a score of articles (the majority of which are case reports) that have appeared from time to time in the medical journals.

Five investigators only have recorded their observations in our language.

REPORT ON PHARMACOLOGY AND THERAPEUTICS.

By JAMES STEWART, M.D.,
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Strophanthus as a substitute for Digitalis.

It is now one hundred years since digitalis was introduced as a medicinal agent. First used as a cathartic and emetic, afterwards its diuretic properties were discovered, and, still later, it was principally used for its so-called sedative action on the heart. It is only a few decades since its true cardiac tonic action was even thought of, and it was not until modern pharmacology stepped in and demonstrated this action that it came to be universally recognized as such. After many ups and downs, it has finally secured a lasting foothold as a therapeutic agent.

During the past few years many drugs have been introduced as substitutes for digitalis. There is a general impression among physicians that digitalis not unfrequently acts in an explosive sort of way. That it is a so-called cumulative agent. By this is meant that it is retained in the system for a certain time without acting in its usual way, and that suddenly the action of what has been absorbed for some time is all at once made manifest, and that in this way dangerous effects will be produced.

When the evidence upon which this supposed action is closely examined, it will be found to have little or no weight. It is absurd to suppose that a drug like digitalis can be retained in the blood for an indefinite length of time without being eliminated. The same law applies to it as to every other agent that circulates as a foreign body in the blood. Within two or three days at most, all drugs circulating in the blood, unless they enter into chemical combination with the blood constituents, must be either eliminated or deposited in the tissues. There is no evidence whatever that digitalis is deposited in the tissues after circulating. The only other possible way it could be retained in the system would be its deposition in the liver on its way from the intestinal mucous membrane to the general circulation. We know that the liver possesses a peculiar function in

retaining, destroying or excreting certain alkaloids. But that digitalis is ever retained by the liver is highly improbable. When its action is closely watched, it will always be found that each and every dose produces its effect on the circulation. There is nothing of the mysterious in its action. It follows the general law of absorption and elimination.

It is undoubted that digitalis is slow in bringing about its physiological action, that it has to be administered in full doses for two or three days before the more pronounced actions on the heart and vessels is seen, and, further, that its action continues some days (three or four) after it is discontinued. It is this slowness in acting that is the principal drawback in its use. Time is an important element to patients suffering from cardiac failure, and for this reason alone it is important that we should endeavor to find an agent that is capable of doing all that digitalis can do, and particularly one that can do it at all quickly. During the past few years many drugs have been introduced as substitutes for it, prominent among which are caffeine, scillain, adonidin, convallamarin, antiarin, helleborein, oleandrin, and erythrophloein. With the exception, perhaps, of caffein, none of these agents have come up to expectations, and even it cannot take the place of digitalis. It certainly acts more quickly, but less effectively. The latest aspirant for this honor is a substance called strophantin, a glucoside obtained from strophanthus, a plant widely distributed throughout Central Africa, and used by the natives as an arrow poison. It produces a follicle from 9 to 12 inches in length, within which are contained from one to two hundred oval seeds. These seeds, when ground and formed into a paste, constitute the poison with which the arrows are smeared.

Prof. Fraser, of the University of Edinburgh, has made this plant the subject of an extended series of experimental investigations both in man and the lower animals. The results were presented to the members of the British Medical Association, in the section of Pharmacology and Therapeutics, at the Cardiff meeting, and will be found in the *British Medical Journal* of November 14th, 1885. Prof. Fraser found that strophantin, no

matter how it is introduced into the blood, powerfully affects the contractile power of all striped muscles. The muscular contractions are more complete and prolonged. The heart muscle is the first to be affected. The contractions are increased in force and rendered slower, while in over-doses the heart's movements comes to a stand-still in rigid contraction. These effects take place even after the influence of the cerebro-spinal centres is removed. They closely resemble those of digitalis, and are accompanied, as in the case of the latter, by a rise in the blood-pressure, and, in certain conditions, by an increased secretion of urine and a reduction of temperature. One part of strophantin in 100,000 will quickly stop the heart of the frog in systole, while digitalin in the same proportion, although it produces slowing and increased vigor, will not arrest the heart. Dr. Fraser even found strophantin, in the proportion of 1 to 6,000,000, arrests the heart's contractions of the frog in extreme systole in twenty minutes. This shows a very marked difference in the power of these two agents in their direct action on the heart. Digitalin, on the other hand, was found to exert a much more powerful influence on the blood-pressure than strophantin. In a frog whose central nervous system was destroyed, a solution of digitalin of the strength of 1 to 20,000 passed through the blood-vessels, produced, in six or seven minutes, such extreme contraction of the vessels as practically to prevent the solution from passing any longer. A solution of the same strength of strophantin had no appreciable, nor could any marked effect be obtained from solutions more than six times the above strength, a very temporary effect only becoming obtainable from a solution of 1 in 2000. "Strophantin, therefore, exerts a much more powerful action upon the heart and less powerful action on the blood-vessels than digitalis." This difference in action, it is conjectured, may be of considerable therapeutic importance. In purely cardiac lesions, it may be found that strophantin, which acts principally on the heart and but little on the blood-vessels, may be a more efficient cardiac tonic than digitalis, as the latter, at times, greatly increases the peripheral resistance, while at the same time it increases the systolic vigor. These deductions are matters, however, of mere conjecture.

Dr. Fraser gives an account of several cases of cardiac disease where he employed strophantin. The first is that of a man, aged 43, who was admitted into hospital suffering from great breathlessness, cough, and swelling of the feet. The liver and spleen were enlarged and the lungs œdematous. The heart was enlarged, and its mitral valve incompetent. The pulse at the wrist was scarcely to be felt, small and irregular, and 40 pulsations could only be felt in the minute, while 160 could be detected at the heart. After a two days rest in bed, the patient was given a tincture of strophanthus, which apparently rapidly and greatly improved his condition. The pulse became stronger, more regular, and less rapid. The œdema of the legs and lungs rapidly disappeared, and the patient expressed himself as feeling very comfortable. Twenty-four hours after the administration there was a rapid and great increase in the quantity of urine excreted, and which continued. The patient ultimately left the hospital in comparatively good health.

The second case was that of a boy, aged 14, who had been ill for three years, and who, on his admission into the hospital, complained of breathlessness, etc. He had œdema of the legs and lungs. There was ascites, occasionally vomiting and diarrhœa. All the above symptoms were due to a constricted and leaking mitral valve. On the ninth day after his admission he began taking strophanthus. The frequency of the pulse almost immediately began to fall and the quantity of urine to increase. The quickness and irregularity of the pulse soon gave place to slowness and regularity. He made a satisfactory recovery from the urgent symptoms, and was convalescent six weeks after his admission.

The third case is one of mitral and tricuspid incompetence in a lad aged 16. He began to suffer from breathlessness three months before he came under treatment. His feet, legs, belly and face were swollen, and the urine was greatly lessened in amount. Very shortly after commencing the use of strophanthus there was a marked change for the better, which continued and increased until his discharge.

In the fourth case, the strophanthus was administered hypodermically in doses of 1-50th of a grain. The patient was a

woman, aged 33, suffering from mitral regurgitation, following acute rheumatism. There was great obstruction of the circulation, with anasarca; the pulse was so rapid and feeble as to be almost uncountable, and the urine was scanty and contained albumen. The action of the drug was apparently distinctly manifest twenty minutes after the first injection, and continued for a period of twenty-four hours. The pulse, which was 136 before the injection, fell in one hour and a-half to 124, in two hours to 98, and in three hours to 88. The urine amounted, on an average, to 29 ounces daily during the six days immediately preceding the injection; on the following day it amounted to 36, and on the second day, and before any more strophantin had been given, to 50 ounces.

The fifth and last case related is that of a female, aged 22, who was under observation for a long time, while suffering from mitral regurgitation. In five minutes after the injection of 1-50 of a grain of the strophantin the pulse, which at the wrist was not previously countable, was 108; in one hour it was 92; in one hour and forty minutes it was 86, and could be easily and correctly counted. The character of the pulse tracing was distinctly improved in twenty minutes; and in forty minutes the patient volunteered the remark that she had not felt so little distress from palpitation and breathlessness for six weeks. The beneficial influence of the single injection in this case lasted eight days. The increase in the flow of urine was maintained for the same length of time. The average quantity of urine voided in the two days preceding the injection of strophantin was 27 ounces; it was increased on the following day to 55 ounces; on the second day to 58, on the third day to 70, on the fourth day to 74, on the fifth day to 82, on the sixth day to 78, on the seventh day to 64, and on the eighth day to 78.

THE TREATMENT OF LUPUS.

It will be remembered that at the International Congress held in Copenhagen last year, with the exception of Kaposi, all the speakers who took part in the debate on lupus looked upon this disease as a tuberculosis of the skin. Although tubercle bacilli

are very frequently found in lupoid infiltrations, and carefully conducted experiments have shown that the injection of lupus tissue into the blood and tissues of the lower animals causes tuberculosis in many cases, we are still far from certain what is the exact pathological relation there between lupus and tuberculosis of the skin—whether they are the same or different affections.

Since the tuberculous nature of the lupus tissue has become so generally accepted, many experiments have been conducted with the view of testing what, if any, influence is exerted over it by antiseptics. Doutrelepont of Bonn has used corrosive sublimate for this purpose. He employs a solution of the strength of 1 in 1000. Compresses soaked in this solution are fixed over the affected parts and covered with gum paper. He gives a report of some twelve cases in all, where a complete cure has resulted. The length of time before this end was attained varied from three to six months. The ages of the patients varied from 14 to 54 years. The cases included the several varieties of lupus—ulcerative, serpiginous, hypertrophic. Not only was there healing of ulcerative surfaces, but a complete absorption of the lupoid infiltrations—"a complete involution of the new formation." In no case was there observed any of the untoward effects of the mercurial preparation, either local or general.

In situations like the eyelids, where it was not convenient to apply the compresses, the sublimate was used in the form of an ointment made by dissolving one part of this salt in a sufficient quantity of sulphuric ether, and then mixing it with 300 parts of vaseline. In order to prevent relapses, it is recommened to continue the application of this ointment after an apparent cure has been obtained.

If Doutrelepont's observation are correct, we have in corrosive sublimate the most efficient means yet discovered of treating lupus. It should be mentioned, however, that in a number of his cases arsenic was given internally while the sublimate was being applied externally. It is a well known fact that the internal use of arsenic, like cod liver oil, has an influence in inducing the involution of lupoid formations.

LACTIC ACID AS AN ESCHAROTIC.

At a meeting of the Society of Physicians of Vienna, held on November 20th, Prof. Mosetig-Moorhof exhibited two patients illustrating the value of lactic acid as a destroyer of new formations. One case was that of a man, aged 55, who came under observation about six months previously with an epitheliomatous ulceration of the left temporal region, involving the left angle of the eye. It was six cubic centimetres in extent, and extended transversely from the lobe of the ear to the angle of the eye, and vertically from the edge of the hair to the angle of the lower jaw. The disease first made its appearance three years previously. A microscopic examination confirmed the clinical diagnosis of epithelioma. On twenty-six different occasions lactic acid was applied to the ulcerated surface, and four times a 50 per cent. solution of it was injected into the infiltrated borders. As a result of this treatment, the whole of the large granulating surface described had completely healed, with the exception of a very small healthy granulating surface. The borders, from being rough and hard, had become smooth and soft.

The second case was that of a woman aged 60, whose trouble began four years ago in the form of a rodent ulcer, which slowly and steadily progressed until it destroyed almost the whole of one cheek and infiltrated the orbit, necessitating the removal of the globe. The carcinomatous nature of the infiltration was confirmed by an histological examination. Twenty applications of lactic acid caused a marked change. The disease soon ceased to progress, and the borders commenced to show signs of healthy action. After the removal of a small piece of dead bone in the upper jaw, this tissue also showed healthy action, and when the woman was exhibited there was nothing to indicate or to lead one to believe that she had a malignant ulceration. The granulations were healthy, and healing was proceeding satisfactorily. On account of the very extensive destruction of tissue there could, of course, be no return to the normal condition.

Mosetig-Moorhof, in answering the question, Were his patients healed? said he knew not, but he was certain that the acid had

removed all the diseased tissue, and that was all the surgeon could do. These cases were certainly a very severe test for any agent. They were practically incurable cases—cases such as no surgeon would attempt to remove. The treatment extended over several months, and on both the patient and surgeon's part required great patience and perseverance. The acid is applied in its pure state to the raw surface. Pieces of cotton wool saturated with it are fixed to the diseased parts, and kept there from six to twelve hours. The application causes considerable pain, and while this lasts it may be taken as an index of the active action of the acid. After its removal, the parts should be washed and covered with cotton wool. The local application of fatty substances should be avoided, as they will subsequently interfere with the activity of the lactic acid. A second application should be made in two or three days.

It is claimed for lactic acid that it is a powerful destroyer of diseased tissue, especially new formations, and that it spares healthy tissue. The only effect of its application to the latter, even for a period of twenty-four hours, is to cause redness.

Reviews and Notices of Books.

Handbook of Pathological Anatomy and Histology.

By Francis Delafield, M.D., and T. M. Prudden, M.D. New York: Wm. Wood & Co.

In this second edition of his handbook, Dr. Delafield, besides associating himself with Dr. Prudden, has greatly extended the scope of the work which was at first merely intended as a guide in post-mortem examinations. The authors modestly state in the preface that the present edition "is intended to supply all the needs of students and practitioners who wish to add a knowledge of the lesions of disease to that of its symptoms." This would seem a very odd reason for limiting the text of the book to a mere statement of anatomical conditions found after death without attempting in any way to explain their significance or even show the connection between the various lesions of the same disease, still less to deal with their causes. The arrangement

of the book is strictly according to locality, a plan which, while making it convenient for reference, also makes its style appear abrupt and jerky, so that the reader, feeling after a few minutes as if he had stumbled across a dictionary, can scarcely help wishing that it would not change the subject quite so often.

With regard to the facts contained in it, since the authors systematically abstain from stating any special tendencies or complications, there is very little to which exception can be taken, though the paragraph dealing with acute interstitial nephritis, " a rare form of nephritis, one of the noticeable features of which is marked dropsy without the presence of albumen in the urine," excites curiosity without satisfying it, and the fact that, after passages like this, no reference to the literature of the subject is given, makes it doubly provoking. The classification and nomenclature is often puzzling, and in many places, particularly with reference to the forms of peritonitis, there is a good deal of hair-splitting, having no obvious pathological basis.

The chapters on Tumors would be more complete if papillomatous growths had not been ignored. The absence of any chapters on diseases of the eye and ear is a serious defect.

As might be expected from any work of Dr. Delafield's, the illustrations form a prominent feature, and show a high degree of artistic finish, but in this, as in most American works of this sort, we notice the employment of needlessly high magnifications. Why Dr. Delafield should require lenses magnifying 700 or 800 diameters to demonstrate merely what less gifted individuals can see perfectly well with 200 or 300 must remain a matter between himself and his optician. The illustrations of lung diseases, which are the best in the book, are the same as those issued separately some years back under the title of " Studies in Pathological Anatomy."

A valuable addition consists in the collection at the end of the book of short practial notes concerning the lesions met with in poisons and in deaths by violence. This is well worthy of study by any one having to deal with medico-legal cases.

The authors, in attempting to adapt the book to all the requirements of students and practitioners, have aimed at what

would be quite impossible in a work of this size. Students need a book in which the doctrine is forcibly set forth and the significance of the facts fully and clearly explained. References to authorities are for the most part unnecessary and confusing, while on the other hand, in writing for practitioners who are capable of weighing evidence on doubtful points, the references should be full and copious. The book under consideration, therefore, though quite unsuited to the requirements of medical students, should be found very valuable to practitioners, and its value would be greatly enhanced if, in a future edition, the references were systematically filled in. The publishers have done their work admirably, both as to the style of the book and the execution of the engravings.

Fowne's Elementary Chemistry.—Lea Brothers & Co., Philadelphia.

This is an American edition of Fowne's Organic Chemistry, by Watts, from the twelfth English edition (1877), togther with Watts' late book, "Physical and Inorganic Chemistry." These two books are bound together, making a very ponderous volume of over one thousand pages of rather trying print.

When we consider the outrages we have suffered at the hands of Fowne's Chemistry, we have some difficulty in approaching this new edition with an unprejudiced mind. We remember in our undergraduate days becoming more or less intimate with most of the inhabitants of our book-shelf, even chumming at times with Gray's Anatomy, but never at any time succeeded in obtaining more than a bowing acquaintance with Fowne's Chemistry. It seemed right and proper to read Fowne's, and to see it noted among the college text-books. It always inspired a profound respect, but it never occurred to us to make ourselves master of it as we did of our Holmes or Dalton. A master of Fowne's! What presumption. We submitted to nightly defeat in our futile endeavors to become familiar with it. Our coy advances everywhere met with a cold, perplexing reception, till at length compelled to fall back on the companionship of lecture-notes or quiz-compends, we passed our examinations with unalloyed pleasure.

Fowne's Chemistry, however, still retains its position as the orthodox college text-book. This is undoubtedly partly due to force of habit and partly to its former worth as a class-book, when the facts were fewer and the laws of chemistry still remained disconnected. With the strides chemistry has of late years made, Fowne's Chemistry, under the editorship of Mr. Watts, has made frantic efforts to keep pace, but with each edition such a mass of new facts had to be added that its usefulness as a text-book has gradually decreased, until of late years not only has that usefulness departed, but it has been positively detrimental to the teaching of sound chemical science in our colleges. The book is oppressive in size, too detailed in matters of fact, and wanting in logical scientific enunciation of the theory. Every student buys one ; few read it ; all dislike it. The present edition attempts to deck out the rickety old skeleton in modern style, but the result is the production of a volume not complete enough to be called an encyclopædia, and too much padded with unnecessary detail to be used as a text-book for students. For those who like Fowne's Chemistry, however, this new edition is probably just the sort of book to meet their views.

Clinical Studies on Diseases of the Eye : Including those of the Conjunctiva, Cornea, Sclerotic, Iris, and Ciliary body.—By Dr. Ferdinand Ritter von Arlt, Professor of Ophthalmology in Vienna. Translated by Lyman Ware, M.D., Surgeon to the Illinois Charitable Eye and Ear Infirmary, Chicago. Philadelphia : P. Blakiston, Son & Co.

The author of this work has been so long known as a master mind in the science of ophthalmology that his writings are always sure to be received with more than ordinary appreciation by those who wish to keep abreast of the times in ophthalmic lore. It will be seen that the subjects treated of in this volume are of primary importance to the general practitioner, including, as they do, all the diseases peculiar to the conjunctiva and anterior portion of the eyeball, which, indeed, comprise the majority of

all the morbid conditions to which the eye is liable. It is a grave fault to be noticed in most handbooks on the eye that the necessarily limited space allotted to each division of the work involves too much brevity in the consideration of just those subjects which this work treats of in a complete and exhaustive manner; but what lends to it a special charm for the reader is the knowledge that the author is giving to the world the benefit of his own extraordinarily rich and fruitful experience as a clinical observer and a practical therapeutist. It is to be hoped that the author will carry out the half promise contained in his preface, and publish other volumes embracing the entire range of ophthalmology. Judging from that which we have now before us, such a complete work would probably become the most popular ophthalmic treatise of the time. The translator is to be congratulated on the faithful and thorough manner in which he has performed his task; the few notes and additions he has made are of real value, and at the same time do not give the impression of altering in the least degree the original character of the work, in the conscientious presentation of which, by a somewhat scrupulously close translation, there are here and there observable some of the faults in phraseology that are, perhaps, more or less inseparable from all translations. The American edition of this work is certain of a circulation sufficiently extensive to meet the most sanguine expectations of both author and translator.

A Treatise on Nervous Diseases: their Symptoms and Treatment. A Text-book for Students and Practitioners.—By S. G. Webber, M.D., Clinical Instructor in Nervous Diseases, Harvard Medical School; Visiting Physician for Diseases of the Nervous System at the Boston City Hospital, etc. New York: D. Appleton & Co.

Dr. Webber's work is intended for students and practitioners, the aim of the author being to give a fairly full and accurate account of the more prominent diseases of the central and peripheral nervous system. We have now a large number of works on the nervous system in the English language, but we know of

no work that is better adapted for the needs of the student and young practitioner than Dr. Webber's. In the first chapter the author deals with the methods to be adopted in testing motion, sensation, and the reflexes. A description is also given of some of the more prominent symptoms common to many nervous affections, and the treatment to be adopted. In the next chapter, a short and, as far as it goes, accurate account of the anatomy and physiology of the brain is given. The following six chapters deal with the diseases of the brain. A particularly full and interesting account is given of cerebral hæmorrhage. Chapters IX to XXI are devoted to the diseases of the spinal cord. The author believes that exposure to cold, especially cold combined with wet, is one of the most frequent exciting causes of tabes dorsalis. It has always appeared to us that cold plays a much more prominent part in the causation of this disease than it gets credit for. The marked frequency of a history of syphilis in tabetic cases is beyond all doubt, but it is far from being proved that the sclerosis is induced by syphilis. In no other tissues have we such changes from syphilis as we find in tabes, and when we consider the comparative worthlessness of antisyphilitic treatment in this disease, even in patients with marked syphilitic histories, it is clear that syphilis is not a direct cause of the disease, except in rare cases. The evidence that exposure to cold and wet is sufficient to cause tabes is beyond all doubt. The diseases of the sympathetic and peripheral nerves are dealt with in a very practical manner. The concluding chapters are taken up with a description of neurasthenia, tetanus, tetany, myxœdema, the toxic neuroses, syphilis, together with an account of the so-called functional affections of the nervous system.

A Practical Treatise on Diseases of the Kidneys and Urinary Derangements.—By Chas H. Ralfe, M.A., M.D., F.R.C.P., Lond., Assistant Physician to the London Hospital. With illustrations. London: H. K. Lewis.

This work, which is one of "Lewis's practical series," is intended to meet the requirements of the general practitioner and the student of medicine. It gives a more detailed account of

urinary derangements than is to be found in any of the ordinary handbooks on the practice of medicine. It begins with a description of the symptoms common to many of the kidney diseases, such as dropsy, uræmia, acetonæmia, neuralgia, asthma, derangements of digestion, etc. One hundred pages are devoted to the means employed for making a clinical examination of the urine. The author strongly urges the necessity, when testing for albumen, to employ heat, in addition to some of the other tests now so commonly employed. The latter, he says, should never be entirely relied on, partly because they sometimes precipitate other bodies, such as urates, alkaloids, peptones, mucin, etc., and partly because in themselves they do not discriminate between the modifications and other forms of albumin. It matters little, however, which reagent is selected, so long as heat is one of the tests employed. The causes of albuminuria are given in detail, and special stress is laid on the frequency and importance of the now so-called functional albuminuria. The theories advanced to explain why albumin exudes into the urine in some diseases, or, rather, why it does not transude in health, are fully described. The view that the epithelium of the glomeruli and tubules possesses the power of retaining the albumin in health is strongly borne out by the fact demonstrated by Dr. Robertson of Glasgow. He injected atropine into a cat whose urine was free from albumin. On the first and second days afterwards the urine became albuminous, but was free on the third, when the animal seemed quite recovered from the effects of the drug. The atropine paralyzes the renal epithelial cells, as it does the cells of the submaxillary and mammary glands, and thus the re-absorption of the albumin is prevented ; it therefore appears in the urine. No doubt many of those cases of transient so-called functional albuminuria are due to the paralyzing influences of ptomaine-like agents during their elimination by the kidneys. These agents arise during the progress of pancreatic digestion. There are other factors, such as increase in the tension of the renal arterioles and changes in the specific gravity of the blood, which take a part in the transudation of albumin. The author explains the small amount of albumin in the urine

throughout the entire course of chronic interstitial nephritis as due, during the first stage, to there being little or no interference with the functional activity of the renal epithelium, that it is able to reabsorb the albumin forced through by the increased pressure; while in the late stages, when the epithelium is destroyed, there is so little blood circulating in the organ from the obliteration of its vessels by the contracted tissue that there is little albumin in consequence to transude. For the same reason the indurated kidney of chronic cardiac disease and the waxy kidney are not attended by any great transudation of albumen.

The different forms of Bright's disease are fully and clearly described, as well as the suppurative inflammations of the kidney and its outlets New growths, parasites, and abnormalities of the kidney each form the subject of chapters.

In the treatment of diabetes, particular stress is laid on the great value of an old, but much neglected, remedy, viz., opium. Cases are given showing what large quantities of this drug can be taken in this disease without causing its usual untoward effects. When a patient is returning from a diabetic diet to his old way of living, it is necessary to give the opium in increased quantities. There appears to be little or no danger of the opium habit being contracted. Under its influence the urine diminishes greatly in quantity, the appetite and thirst are restrained, and the patient gains in strength and weight. There is no danger of bringing about diabetic coma from the use of opium, even in large doses. The opium is called for, when, after a fair trial of restricted diet, sugar still continues to be excreted in the urine.

Chapters on lithuria, oxaluria, phosphaturia, peptonuria, and hæmoglobinuria conclude a work which will be found to be a profitable addition to the physician's library.

The *American Journal of the Medical Sciences* for January, 1886, appears in a new and enlarged form, being called the *International Journal of the Medical Sciences*, and under the joint editorship of Dr. J. Minis Hays of Philadelphia and Dr. Malcolm Morris of London. The present number contains several papers of much merit, contributed by leading English

writers as well as the usual original articles from prominent cis-Atlantic authors. The special departments of the quarterly summary of medical progress have each been placed under the direction of a responsible and experienced director. This well known quarterly is maintaining its high position, and the recent changes will undoubtedly add much to its value and interest.

Books and Pamphlets Received.

Climatology and Mineral Waters of the United States. By A. N. Bell, A.M., M D. New York, Wm. Wood & Co.

Diagnosis of Diseases of the Brain and of the Spinal Cord. By W. R. Gowers, M.D., F.R.C.P. New York, Wm. Wood & Co.

Diseases of the Lungs of a Specific, not Tuberculous, Nature. By Prof. Germain Seè. Translated by E. P. Hurd, M.D., with Appendices by Geo M. Sternberg, M.D., and Prof. Dujardin-Beaumetz. New York, Wm. Wood & Co.

Clinical Notes on Uterine Surgery. By J. Marion Sims, A.B., M.D. New York, Wm. Wood & Co.

Venereal Memoranda for the Student and Practitioner. By P. A. Morrow, A.M., M.D. New York, Wm. Wood & Co.

Cutaneous Memoranda. By Henry G. Piffard, A.M., M.D. Third edition. New York, Wm. Wood & Co.

The Extra Pharmacopœia, with the additions introduced into the British Pharmacopœia, 1885. By Wm. Martindale, F.C.S., &c. Medical References and a Therapeutic Index of Diseases and Symptoms. By W. Wynn Westcott, M.B., Lond. Fourth edition. London, H. K. Lewis.

Practical Suggestions respecting the varieties of Electric Currents and the Uses of Elebtricity in Medicine. By Ambrose L. Ranney, M.D. New York, D. Appleton & Co.

The Influence of Sex on Diseases. By W. Roger Wiliiams, F.R.C.S., &c. London, J. & A. Churchill.

A Manual of Animal Vaccination preceded by Considerations on Vaccination in General. By Dr. E. Warlemont, Translated by Arthur J. Harries, M.D. London, J. & A Churchill.

The Principles and Practice of Medicine. By the late Charles Hilton Fagge, M.D., F.R.S. Including a section on Cutaneous Diseases, by P. H. Pye Smith, M.D., M.C.S.; chapters on Cardiac Diseases, by Samuel Wilks, M.D., F.R.S.; and complete Indexes by Robert Edmond Cannington, M.D. Vol. I. Philadelphia, P. Blakiston, Son & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, November 6th, 1885.

T. G. Roddick, M.D., President, in the Chair.

Double Ovariotomy.—Dr. Wm. Gardner exhibited the tumors removed at one operation from a case of double ovarian disease. The patient had been under observation for a year, the tumors slowly increasing, evidently cystic—that on the left side causing a great deal of pain, and being situated low in the pelvis. The tumors were multilocular cystomata, of the size of a large infant's head. The left-sided tumor was intraligamentous, requiring enucleation from the broad ligament, and giving rise to very troublesome pelvic bleeding. The right tumor had a good pedicle and was secured by ligature without much difficulty. Over each tumor the Fallopian tube coursed, being much elongated and distended, sausage-like, all except a small part at the uterine end. The tubes, in parts, measured $1\frac{1}{4}$ inches in diameter. They were filled with fluid resembling that in the cysts. No trace of ovarian stroma could be found; still the woman had always menstruated regularly and profusely. Although the operation was a long one, the patient being over three hours under ether, she made a perfectly easy recovery, the temperature once only reaching $100\frac{4}{5}^{\circ}$.

Ovarian Tumor.—Dr. Trenholme exhibited this specimen, which he had removed that morning from a woman, aged 42, who had suffered for about twelve years, and had been tapped eight times. There were a great many adhesions over the front, none behind. The cyst weighed 32 lbs., and was made up partly of hard nodular masses, feeling like scirrhus. Dr. Johnston was asked to examine these masses and report at next meeting.

Typical Case of Psoriasis.—Dr. Roddick brought this specimen, a boy aged 15, before the Society as being an unusually good example of this disease. All varieties were to be seen over his body and limbs. Three years ago this lad had been treated, with good effect, with chrysophanic ointment and arsenic, but of late had given up all treatment. The disease dates from about a month after he was revaccinated—that is, when about 7 or 8 years of age. Dr. Roddick knew of another similar case dating from vaccination, but said it was most probably a coincidence, not the cause.

Dr. Blackader had observed several odd symptoms persisting after dermatitis, caused by vaccination.

Fatal Pulmonary Embolism, arising from simple femoral thrombosis.—Dr. George Ross exhibited the specimen. The heart and lungs had been removed together, and the right side of the heart and pulmonary artery laid open. The left branch of the latter was seen to be plugged by a thick fibrinous clot beginning an inch above the valves, the lower end lying loose in the main artery and for some distance curled back upon itself. Still nearer the heart, in fact almost touching the valves, lay a second loose clot of the same appearance, about three-quarters of an inch long. The clotting extended far into the lung, even to the small branches. The right branch and its divisions were quite similarly occupied by an extensive fibrinous deposit. The femoral vein was also shown, containing a clot several inches in length and extending a long way down the internal saphena.

The patient was a young woman who had presented the usual symptoms of a simple anæmia for some months, when she developed pain and swelling of the right leg. She was then admitted to the Montreal General Hospital under Dr. Ross, when the existence of femoral thrombosis was readily detected by the presence of a firm cord in the situation of the vessels. Her general condition was good, with the exception of a moderate degree of anæmia. One week after admission, after having passed a good night, she complained at 5 a.m. of suddenly feeling faint. This soon passed off, and nothing more was thought of it. The day nurse afterwards saw her during the forenoon lying in bed knitting as usual. At 12.45 p.m. she became suddenly breathless, panting and distressed. The house physician saw her at once, and gave stimulants, but at 1 p m she was dead. The occurrence of pulmonary embolism was immediately suspected. Dr. Ross remarked that, although very frequently meeting with femoral thrombosis, it was the first time he had ever observed this fatal accident following from it. It had been his misfortune, a short time since, to meet with a sudden death ten days after a natural confinement and an apparently perfectly natural puerperium. An autopsy in this case likewise showed the fatal result to have occurred from pulmonary embolism, as had been suggested—the source of the clot, the uterine sinuses. The present case was of interest, from the syncopal attack in the early morning, which, no doubt, was produced by the surprise of the heart at the arrival of the foreign body. He had been very much struck in both these cases by the great extent

of the clotting through the branches of the pulmonary artery, which must have taken time to form, although no pulmonary symptoms prevailed during that period.

Dr. Kennedy had also seen a case of sudden death take place on the thirteenth day after a natural delivery, and while apparently convalescing most satisfactorily. No autopsy was held, but death, no doubt, was caused by embolism.

Laceration of the Spleen; Splenectomy; Death.—The President showed some fragments of spleen which he had removed by operation from a man, the subject of a terrible accident.

Dr. Eberts, who accompanied the ambulance waggon, gave the particulars of the accident. He found the man lying on the deck of one of the ocean steamships, suffering from shock, almost pulseless, and cold. He learned that the man had been working in the hold, and that a bucket holding about ten hundred weight of coal fell on him. The bucket struck an obstacle in its descent, and had partly burst. A small wound was made in the left side, between the last rib and crest of ilium, probably from a splinter or loosened bolt.

Dr. Roddick said that on arriving at the hospital he found a portion of the omentum protruding through the wound in the side. He enlarged the opening and found internal bleeding; a piece of spleen was withdrawn, and it was found that the hemorrhage came from its torn surface. All the spleen was then removed and the pedicle tied. The kidney was found displaced and thought to be lacerated. The man died in five or six hours. Three or four ribs were broken and bent inwards, probably causing the lacerations.

Dr. Johnston, who performed the post-mortem, found about five ounces of blood in the abdomen and about as much in the pleura. The diaphragm, though scratched on its under surface, was not torn through.

Different views were taken by members as to the cause of the lacerations.

Dr. Wilkins said he had seen in the hospital, three or four years ago, a case where a young man, from being thrown off the cars, had a kidney very much lacerated and his liver less so. All this without any external wound.

Dr. Gardner reminded Dr. Roddick that he (Dr. R.) had exhibited such a specimen some years ago to this Society. Laceration of the kidney was produced in an old lady who fell down stairs. No external wound was made.

The PRESIDENT then delivered an address on the past year's work. Dr. Roddick began by thanking the Society for the honor they had done him in electing him president for the second term. He referred to the deep interest he had always taken in the welfare of the Society, and spoke of its formation in 1870. Some of the earlier papers and discussions were very interesting, the older members of the profession being all at that time in the habit of attending the meetings and contributing papers. Reference was made to the fact that three of the former presidents and two secretaries had died during the brief period of existence of the Society. The present membership of the Society is 69, one only having joined during the year. The work done compares favorably with preceding years, although the average attendance has been small. The following papers were read during the year :—" Missed Abortion," Dr. Alloway ; Sycosis, Dr. Wood ; Six cases of Removal of Uterine Appendages, with results, Dr. Trenholme ; Notes of two cases of Lead Poisoning, Dr. Mignault ; Out-door Practice, Dr. R. MacDonnell ; Hydrate of Chloral and Camphor as a Local Anæsthetic, Dr. Smith ; Notes on the Diseases prevalent among the Indians, by Percy Matthews, M.R.C.S., Edin., read by Dr. Robt. Bell ; Remarks by Dr. O. C. Edwards ; Pulsating Empyema, Dr. Geo. Ross ; Musculus Sternalis in Anencephalic Monsters, Dr. Shepherd ; Antiseptic Midwifery, Dr. Armstrong ; Partial Epilepsy, Dr. Mignault ; Atmospheric Materies Morbi, Dr. Henry Howard ; Comma Bacillus, Dr. McConnell ; " Tetany," Dr. Stewart ; Case of Extra-uterine Gestation treated by Faradization, Dr. Gardner ; Notes on Gynæcology, Dr. Smith. Besides these, there were two very important special meetings held—one " to consider Dr. Tuke's Report on the Insane Asylums of the Province of Quebec" ; the other " to discuss the proposed Public Health Bill for this Province, and also to make known a scheme for the management and prevention of contagious diseases, especially cholera." Many living specimens were exhibited, and some of the papers were illustrated in that way. The thanks of the Society are due to Dr. Sutherland and Dr. R. J. B. Howard for the admirable pathological demonstrations given during the year. The announcement was made that for the future Dr. W. G. Johnston would conduct this department of the proceedings, that gentleman's devotion to the subject of pathology being well known. In conclusion, the President congratulated the members on the progress which, as a Society, they had made, and pointed out the many advantages likely to accrue to both young and old in the profession by frequent attendance and constant participation in the debates of the Society.

Gunshot Wounds of the Testicles.—Dr. Bell read a paper on two cases. (*See page* 334.)

The President said he had seen both these cases. In the first he believed the bullet burnt its track close to the urethra, which sloughed, and caused the leak five or six days after.

Dr. Godfrey said he well remembered the case of a man under Dr. Stephenson's care in the hospital (1840), who had an injury to the scrotum, followed by erysipelas and sloughing away of all the integument. A consultation of the staff was held to see if castration ought to be performed. It was decided to try dressings of the old Edinburgh red wash. The testicles under this treatment became well covered with a good-looking scrotum.

Dr. Kennedy had seen a man who had been gored through the scrotum by a bull; a portion 4 by 3 inches was torn away. After bringing the rest together and sewing, it appeared almost as perfect as ever.

Dr. Campbell mentioned having seen a man with but one testicle and hair on his face only on that side. He had also seen a man with three testicles.

Dr. Alloway had a friend who, while fox-hunting, was thrown and had the whole scrotum bared from the testicles. He got a needle and thread from a farmer and stitched him up.

The President spoke of a case he had seen in hospital; the man had fallen from a height and been caught by a nail, tearing all the scrotum and skin of the penis away. By the aid of skin-grafting he made a good recovery.

Injuries to the Sternum.—Dr. Blackader related two such cases. One, a boy aged 18, who, while exercising on the parallel bars, felt something in his chest give, and causing him to suddenly drop. After a fortnight's rest he went back to the gymnasium, and whilst doing a similar exercise again had suddenly to let go, with symptoms as before. This time he (Dr. B.) was consulted, and on examination found separation of the first and second pieces of the sternum. Dr. Roddick was also consulted in this case. The second case was that of a young married lady, aged 26, who had been hit by a tennis ball. Here the lower portion of the gladiolus was riding over the manubrium. The parts were painful and swollen. Plaster was applied and rest ordered.

Fracture of Clavicle with Emphysema.—Dr. Campbell said that three weeks ago he was sent to attend a coachman who had

gone to sleep on the seat of his brougham and had fallen off, striking his clavicle against one of the wheels. The parts about were greatly swollen and emphysematous. Fracture of the clavicle was easily made out, and it was thought at first it must have been broken. He was sent to hospital, where it was found that only the clavicle had been fractured.

The PRESIDENT said this was a rare complication, and could only be produced by direct violence, not by the usual fall on the head or shoulder.

Stated Meeting, November 20th, 1885.

T. G. RODDICK, M.D., PRESIDENT, IN THE CHAIR.

Parovarian Cyst.—DR. TRENHOLME shewed a cyst, weighing 55 pounds, removed by him from a woman aged 42 years. There were no adhesions, but the cyst was very vascular on its anterior surface; here also its walls were much thinner than posteriorly. Patient doing well.

DR. CAMPBELL read a paper on *Vaccination and Revaccination.* He attributed the cause of so many deaths occurring in French Canadians under ten years, during the present epidemic of smallpox in Montreal, to the fact that it is just ten years since the opposition to vaccination began. There was consequently a very large accumulation of unprotected material in a certain quarter of the city, and in that quarter smallpox raged fiercely. He then took up the question of affinity between human smallpox and cow smallpox, and proceeded to argue that they were one and the same disease. He showed that variolous matter had been in numerous cases inoculated on the cow, and the resulting matter retransmitted to the human subject in many thousands of cases, giving vesicles in all respects similar to what is known as "Jennerian," and with full protective influence against smallpox. The comparative value of humanized and bovine vaccine was fully gone into. Dr. Campbell stated that till the present epidemic he had always used the dry, humanized crust or liquid humanized lymph, and was satisfied with the result, not having had in over twenty years a case of smallpox in any child thus vaccinated with humanized lymph. For the last three months he had employed bovine matter, and his experience was that it was very unreliable—the failures being numerous. He, however, repeated the operation many times,

and this perseverance resulted eventually in excellent success. He assured the Society that after as many as ten failures, the eleventh time had succeeded and good revaccination taken place. Having medical charge of the Infantry School Corps station in the barracks at St. Johns, he had used bovine lymph on the men, and in a force of one hundred and twenty-three he had, after numerous repetitions, succeeded in having good results in one hundred and twenty. In private practice such results could not have been obtained, for the patients would not have submitted. Humanized lymph does not require such perseverance, and is therefore, he believed, preferable. The paper was a lengthy one, and discussed the question fully.

Discussion.—Dr. Reed thought the weight of evidence went to show that vaccine was a germ *sui generis*, cultivable on the human and bovine species, and referred to the report of the Lyonnese Commission, and to the fact that Martin of Boston, after prolonged trial, had given up the attempt to make vaccine by variolous inoculation of animals. The Board of Health of Montreal had already furnished 20,000 points of Boston virus to its officers for the present epidemic. Would prefer arm-to-arm vaccination, but the public prejudice is strongly in favor of bovine vaccine. The experiences of this year indicate that, in presence of contagion, revaccination should be practised without regard to lapse of time or a previous attack of smallpox, as several cases of varioloid had been observed in the city, which had occurred within a few months of successful vaccination with two marks, and also several cases of second attacks of smallpox.

Dr. McConnell remarked that he could not agree with Dr. Campbell's conclusions that *vaccinia* was *variola* modified by passing through the heifer. The weight of evidence was mostly in favor of the view that they are distinct affections. Dr. McConnell spoke of the unreliabitity, in his experience, of much of the bovine lymph supplied during the present epidemic; it failed more often than it succeeded, and in many cases where the virus seemed to gain a foothold a "raspberry excrescence" was the result, which was doubtless only a local irritation of the skin, appearing sometimes ten days or a fortnight after vaccination, and affording no protection whatever against smallpox. From the facts that the points became useless in a week or two, while vaccine crusts will retain their infective properties for months, or even years, there would seem to be a difference in power not easy to explain. If the action of the virus depends on a germ, perhaps we have it in

the spore condition in the crust, while it may be in a growing condition, if taken from the vesicles about the eighth day; and being, in the case of bovine lymph, propagated continually from vesicles, circumstances not well understood may have led to the attenuation so evident in much of the bovine lymph supplied him. Dr. McConnell had, during the greater part of the epidemic, used humanized lymph, and had very few failures and a much more typical vaccinia, and had seen no evil results occurring in those vaccinated (25,000). From one to two hundred persons might be vaccinated from a single good crust.

Dr. J. J. Gardner, house surgeon to the Protestant Civic Hospital, said he had had several patients in the hospital with smallpox who had been recently successfully vaccinated. One, a young girl about ten years of age, came in with two or three primary marks and two revaccination marks from a vaccination performed two months previously. She had a light attack of smallpox. A young man aged twenty-five came in with hemorrhagic smallpox, and died in a few days; he also had primary marks and marks from a successful vaccination performed two months previously. Dr. Gardner intends writing out a complete report of such cases.

Dr. Kennedy said he had used humanized vaccine for the past ten years from the same strain, and it always gave satisfaction. During this epidemic his supply gave out, and he was forced to use the bovine lymph, often producing a spurious "take," looking like a strawberry; still oftener, it would not take at all. He found it almost impossible to vaccinate infants with the animal lymph. He had performed *successful vaccinations* with a crust *a year old.* He mentioned having seen two young girls, sisters, both pitted from attacks of smallpox ten years ago Took smallpox again this fall. He was sent to attend one of them, and finding she had smallpox immediately vaccinated her sister, who, however, must have had the disease already, as the eruption came on seven days later. Dr. Kennedy believes the vaccination lowered her attack, as her illness was much lighter than her sister's.

Dr. Mills said that the history of bacteriology went to prove that the quantity of germs thrown into the system the greater the constitutional effects, therefore he would vaccinate in several places.

Many other of the members gave it as their experience that the animal lymph was very unsatisfactory in its results, and spoke of the almost impossibility to vaccinate young infants with it.

Dr. Roddick said that the vaccinator, with his unclean lancet, might be the cause of some of the very highly inflamed arms spoken of.

Dr. Stewart exhibited a man, aged thirty, who has been suffering for about six months with the prominent symptoms of lateral sclerosis. The case was looked upon as of protopathic origin.

Stated Meeting, Dec. 4, 1885.

T. G. Roddick, M.D., President, in the Chair.

Black Gallstones.—Dr. MacDonnell exhibited a number of gallstones which had been removed from a dissecting-room subject. The stones were of a jet-black color, and resembled peppercorns in shape and size. When dry they were very friable, breaking with a resinous fracture and being easily reduced to a powder resembling India ink. This kind of gallstones, though rarely met with, has been described by Budd, who gives an excellent colored illustration of them. They do not contain cholesterine, but are made up of bile pigment and lime.

Appendix Vermiformis communicating with the Ileum.—Dr. MacDonnell also exhibited a specimen of appendix vermiformis which had formed a communication with the ileum about an inch from the valve. A probe could be passed through the appendix into the ileum. It was thought that the attachment to, and communication with, the ileum was due to a concretion which had previously existed in the appendix and had caused adhesive inflammation; as the specimen was taken from a dissecting-room subject, there was no history.

Thrombosis in the left ventricle of the Heart.—Dr. George Ross showed a heart which had been removed by Dr. Johnston from a patient who lately died in the General Hospital. Both sides of the heart were greatly distended, and there was marked bulging of the wall of the left ventricle just above the apex. The cavities contained soft blood-clots. There was no clot in the pulmonary artery or its branches. On opening the left ventricle a firm, decolorized and apparently organized thrombus was found filling the spaces between the columnæ carneæ in the vicinity of the septum and projecting slightly into the cavity at a point corresponding to the bulging previously mentioned. The thickness of the thrombus exceeded that of the ventricular wall, which in places was reduced to one-fifth of an inch. A space between the thrombus and the heart wall was filled with a choco-

late-brown fluid and the endocardium seemed to have disappeared. At some points the heart-muscle was pale and in part fibroid. A small, firm, decolorized clot was also seen lying loosely behind the left coronary segment of the aortic valve: from this was prolonged a clot which completely plugged the left coronary artery. A small, firm clot filled the left auricle. Valves normal. Dr. Ross remarked that the patient was a strong, healthy girl, about 25 years of age, who came into the hospital to be treated for an ulcer of the leg, which was supposed to be of syphilitic origin. Suddenly she was seized with a violent pain in the left side of chest and great difficulty of breathing; her pulse was almost imperceptible at the wrist, and she was in great distress. The dyspnœa and pain grew worse, and the patient gradually sank and died five days after the first seizure. Dr. Ross at first thought it was a case of pulmonary embolism, but was now at some loss to account for the symptoms.

Dr. Armstrong suggested that the clotting of the blood in the left coronary artery and the consequent loss of nutrition might, perhaps, account for the symptoms observed before death.

Dr. Mills said that possibly the plugging of the coronary artery might explain the other clots and the peculiar symptoms, the lower clots being formed by the weakening of the heart's action due to loss of nutrition from plugging of the left coronary artery. In such an enfeebled heart a murmur could scarcely be expected to be heard, the obstruction to circulation and interference with nutrition giving rise to pain and disturbance of action of the pneumogastrics. Dr. Mills, in conclusion, remarked that there were other cases reported with the same symptoms, due to plugging of the coronary artery alone.

Encysted Calculus of the Bladder.—Dr. Sutherland showed for Dr. A. E. Malloch, of Hamilton, Ont., a bladder with an encysted calculus. Dr. Malloch's report was as follows: J. C., aged 76, had cystitis of one year's standing, due to catheterization, necessitated by retention of urine, the result of hypertrophy of the prostate gland. The bladder had been sounded for stone on two occasions, and explored with the finger by an incision made in the perineum, but no stone was discovered; the bladder was drained through the perineal incision, but no appreciable relief followed, and the man died four days after. On examining the bladder post-mortem, its coats were found to be much hypertrophied, and the prostate of large size. The summit presented a diverticulum a third the size of the whole bladder, and contained a calculus the size of a small marble, and composed of

triple phosphates. The communication between the bladder and diverticulum was of small size, and would only admit a lead-pencil.

Elephantiasis of the Leg.—Dr. Sutherland exhibited a remarkable specimen of elephantiasis of the left leg, which had been sent to the museum of McGill University by Drs Gooding and Greaves of Barbadoes. The leg had been removed from a negro, aged 23, who had suffered since the age of 11 from attacks of fever. After each attack the leg increased in size, until, from the great inconvenience it caused him, he decided to have it amputated. The enlargement commencing about three inches below the knee-joint, it was decided by Drs. Gooding and Greaves to preserve the joint. Whilst amputating, but little blood was lost, but some four pints of lymph escaped. The man survived the operation only nine days, dying of pyæmia. The leg, after being preserved some time in alcohol, measures around the calf 25½ inches, instep 21 inches.

Fracture of the Spine.—Dr. Shepherd presented a specimen of fracture of the spine, which had been removed several days before by Dr. W. Johnston from a patient who had been under his care some three years before. The man, three winters ago, whilst cleaning the snow from the roof of a house, missed his footing, and fell to the pavement below, a distance of some fifty feet. He was immediately brought to hospital, and, on examination, it was found there was a fracture ot the back in the lumbar region. There were great swelling and deformity of the parts and complete paralysis of sensation and motion of legs. He had also incontinence of urine. The patient remained in hospital some months, regaining, after a few weeks, partial sensation and motion. The deformity very much lessened after the effusion was absorbed. He even took a situation as coachman for some time after leaving hospital. Last spring he hired himself out as assistant gardener, and said, whilst digging one day, felt something give way. Then he had severe pain and some swelling at site of the old injury, and lost the power to use his leg. He was brought to hospital, and it was found there were some swelling and great tenderness at site of old injury in lumbar region, complete loss of sensation, and but little power of motion in lower extremities. After being in hospital a week or two, he developed phthisical symptoms, and was transferred to the medical wards. He died ot phthisis a few days ago, and at the post-mortem the vertebræ of the lumbar and lower dorsal regions were removed. The specimen showed slight left lateral curvature, with moderate angular curvature opposite the second

lumbar vertebra. On making a vertical section, the body of the second lumbar vertebra was seen to be partially absorbed, and a ring of bone encroached upon the cord at this spot. There was a fracture of the spines of the second and third lumbar, and the invertebral substance between these two vertebræ had completely disappeared. There appeared to have been a fracture, also, of the lamina of the second lumbar. The cord and membranes disclosed nothing to the naked eye, and were removed for further examination.

Cerebral Syphilis.—Dr. Geo. Ross then read a paper on this subject. (*See* page 326.)

Dr. Henry Howard, after complimenting the reader of the paper on the excellent manner the cases had been reported, stated that he had seen many obscure affections of the brain due to syphilis, and had seen many apparently hopeless cases recover after anti-syphilitic treatment. In many fatal cases no cause is discovered after death—that is, there is no gross lesion. He believed that, in the future, changes will be discovered by the aid of the microscope which will fully explain everything. What is necessary is a more exact knowledge of the histological anatomy of the brain, and then the pathological condition will be more readily recognized. Even now, brains formerly considered normal are found, on accurate microscopical examination, to have undergone distinct pathological changes, especially in and about the bloodvessels.

Dr. Stewart considered that cerebral syphilitic lesions are much better treated by mercury than by potassium iodide; mercury is an antidote to syphilis, potassium iodide is not. Mercury should first be tried, and inunction is the best method; in this way the remedy is introduced more effectively, even than by hypodermic injection.

Dr. A. Lapthorn Smith related a case of epilepsy where the post-mortem revealed a syphilitic gumma in the brain. There was no history of syphilis.

Dr. F. W. Campbell said he had some experience with inunction in the treatment of syphilis, and he had found that at times it is as difficult to get the patient under the influence of mercury by this method, as when mercury is given by the mouth; he had seen some patients salivated by five grains of blue pill.

Dr. Shepherd, in speaking of the difficulty of getting a history in many cases of suspected syphilis, mentioned several cases in which there were well-marked tertiary symptoms, but

no history of primary or secondary manifestations. In one case, that of a medical man, secondary syphilis developed, and absolutely no history of primary sore could be obtained. In tertiary syphilis, he advised first the use of potassium iodide ; if that failed, then mercury ; and if mercury failed, then a combination of the two. He mentioned also that he himself is easily salivated by five grains of blue pill, and he knew of several like cases, and asked whether such a small amount of mercury is efficient to act as an antidote to the syphilitic poison. He thought not.

Dr. Wilkins regretted sufficient notice of meeting had not been given to afford him time to look up his cases of cerebral syphilis, of which he had several. Although pain in the head is usually present in cases of this kind, he could call to mind two well marked cases of this disease in which the absence of pain was a prominent feature. One of these cases had been under observation for several years, and was attended with repeated attacks of paralysis without loss of consciousness, yielding to treatment with iodide of potassium. As soon as symptoms improved he discontinued treatment, and in the course of a few months was again attacked with similar symptoms, again yielding to treatment ; but he did not keep it up. This was repeated three or four times, some paresis remaining permanent. Another case was one in which the symptoms set in with stupor, but without loss of consciousness. This state was quickly followed by epiliptiform convulsions coming on with but slight intervals, and lasting in all several hours. He improved rapidly under large doses of iodide of potassium. Both patients stated that they were not troubled with headache. From the speedy action of the iodide, Dr. Wilkins thought these might belong to that class of cases in which, post-mortem, no gross lesion was perceptible, but that the microscope revealed neoplasms affecting bloodvessels, narrowing their calibre, limiting or cutting off the supply to certain portions of the brain, and thus accounting for the motor symptoms that were present.

Dr. Alloway reported a case of epilepsy, due to syphilis, cured by large doses of potassium iodide.

Dr. Roddick said he had treated the second case spoken of by Dr. Wilkins, six years ago, for the primary sore. He had always treated him since ; here iodide of potassium always did good. Dr. Roddick mentioned that urethral chancres were not always recognized as such, but most frequently were treated as cases of gonorrhœa. Secondary symptoms coming on, the

physician was often puzzled. Some of the syphilitic lesions seen in adults were due undoubtedly to hereditary syphilis.

Dr. Ross, in reply, said that pain in the head, although a prominent symptom in his cases, he should by no means always expect to find. No one symptom is pathognomonic of cerebral syphilis; but pain comes near to being so, especially if it be nocturnal. Many cases are most obscure, and no history of syphilis can be obtained.

(*From our own Correspondent.*)

CHATHAM MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, Dec. 4th, 1885.

G. H. Tye, M.D., in the Chair.

Hæmorrhage from a Wound of the Cervix Uteri, simulating an impending abortion.—Dr. McKeough related a case of a woman who had had two previous miscarriages, and who, he supposed, was threatened with another. The patient was between three and four months pregnant, complained of some pain in the pelvis, which, however, was not intermittent, and, judging from the condition of her clothes and bed, there had been considerable loss of blood. Pulse was quick and feeble. Her countenance was pale and anxious. Numerous clots were removed from the vagina, which was afterwards tamponed with pledgets of cotton-wool soaked in boro-glyceride. The following day the patient admitted that she had attempted to produce an abortion by violence, a large knitting-needle and a catheter being the implements used. After the tampon was removed, an examination of the cervix was made, and revealed an old bilateral laceration. In the posterior everted lip was a recent deep, ragged wound, to which a clot was attached. Its removal caused a fresh spurt of blood, which was controlled by pressure. This occurred six weeks ago, and there have been no symptoms since of a premature expulsion of the fœtus.

Hæmorrhage from the sac of a Spina Bifida, resembling symptoms of Placenta Prævia.—Dr. Tye reported a case of a woman to whom he was called recently, and found in labor; pains were coming regularly, and with each contraction of the uterus there was quite a profuse gush of blood. The accouchement had commenced with the escape of a very large quantity of water, which was immediately followed by the loss of a considerable amount of blood. The os was not sufficiently dilated to make a diagnosis positive, but the doctor thought it might be

a case of placenta prævia. As labor progressed and the os dilated, an acephalous monster was diagnosed. The fœtus, on being expelled, was found, besides being acephalous and having rudimentary genital organs, to have a large spina bifida, extending from the neck to the sacrum, the sac being ruptured. To the spinal openings large clots of blood were attached, and over the interior of the sac small clots also adhered. The placenta came away in half an hour with a very moderate amount of hæmorrhage. The child was exsanguine, but the mother showed no symptoms of loss of blood.

Multiple Sarcoma.—Dr. Holmes read the history of a case of multiple sarcoma, prefacing it with a few remarks upon this form of neoplasm. He first pointed out the distinguishing features of these tumors, both from a histological and clinical standpoint. Referring to their microscopical characteristics, he described the usually accepted divisions of round-celled, spindle-celled and giant-celled or myeloid sarcomata. Of all tumors that affect the bones, these were by far the most common, and they showed a decided preference for the epiphysal ends. In diagnosing them, they were to be distinguished from carcinomata, benign growths (especially the enchondromata), syphilitic enlargements, osteo-myelitis, and white swelling. From syphilitic growths they could be distinguished by the history of the action of specific treatment; carcinomata were generally more rapid in their growth, the lymphatics are more frequently affected, and the cachexia more marked; white swelling usually occurs in scrofulous subjects, interferes with the function of the joint, is liable to suppurate, skin is glossy and tense, and the superficial veins often enlarged, temperature elevated, more painful, and is more or less amenable to treatment. While a sarcoma may pulsate, and has a liability to spontaneous fracture, it does not interfere with movement of joint, etc. So long as the investing capsule of a sarcoma remains intact, the enlargement simply encroaches upon adjacent parts, but as soon as the capsule ruptures, contiguous structures become involved, and systemic infection takes place more or less rapidly through the blood-vessels. Traumatism is the most fruitful cause of primary sarcoma, about half the cases being traceable to blows, bruises, etc. Complete early extirpation offers the best chance of cure. If the tumor be so situated as to admit of amputation, it is wise to remove the limb as high as is compatible with safety to the patient. The case was that of a boy, aged 17, with a good family history. A tumor, neither painful nor tender, appeared upon the radial side of the palm of the hand, and grew pretty rapidly; it was removed four

months after it was first noted. The wound seems to have done well for a week after its removal, when the tumor reappeared and grew rapidly. The following week several tumors appeared upon different parts of the body, and when the case was first seen by Dr. Holmes these tumors numbered twelve or fourteen, and were situated chiefly upon the arms, neck and back; those on the back were arranged in pairs along the spine. The tumor and suppurating wound on his hand eventually became very painful; to relieve him of the pain, and to rid him of the offensiveness of the discharge, which gave rise to a septic fever, the hand was amputated. The operation gave him great relief, and for a time his downward progress seemed arrested, but he subsequently lost ground, and died eight months after the first appearance of the primary tumor.

Quite an interesting discussion followed the reading of this paper, in which Drs. Hall, McKeough, Murphy, Rutherford, and the Chairman took part. The subject was considered eminently practical, notwithstanding that cases of this kind were not frequently seen by country practitioners, still, when they did occur, the necessity of recognizing them at once was of the utmost importance. If a thorough knowledge of these neoplasms were more general, their recognition in an early period of their growth would be more frequent, and lives might be saved which are now sacrificed.

Pharmaceutical Notes.—Dr. Hall showed a preparation of iron that he had manufactured himself and found serviceable in cases where the tincture was inadmissable. A solution of 544 grs. of citric acid in 1 oz. of water is heated over a water bath and brought to boiling point; then 1 oz. of a solution of liq. ferri perchlor. (1 to 3) is added, afterwards 1000 grains of carb. sodæ. It is then allowed to cool, and proof spirits added to make 4 oz. He claimed that it was almost tasteless, permanent, alkaline, miscible with water, and of the same strength as the tincture. It is cheaper than dialyzed iron, and mixes better with water, while it agrees with the most delicate stomachs. Dr. Hall also gave some practical information regarding the preparation of suppositories. He gave the following mode of preparing them, which, after much experience, he considered the best and simplest for physicians who had to manufacture their own: Mix the necessary ingredients together with a little water, then grate over the mass the desired quantity of ol. theobroma, rubbing up the mass at the same time with a pestle until all the ingredients are well incorporated. Shape with hand and spatula, which is preferable to moulds. Use Canada Balsam if they require any adhesive material.

CANADA

Medical and Surgical Journal.

MONTREAL, JANUARY, 1886.

THE LONGUE POINTE ASYLUM.

The visit of Dr. Tuke to this asylum, the startling report he furnished of the dreadful abuses existing there, the excitement produced throughout the country by these revelations, the urgent call to the Government for an abatement of such crying evils—these things surely cannot yet be forgotten. The public, indeed, very soon lose sight of any philanthropic object when the press cease writing upon it; but we do believe that the attention of the entire community was so forcibly directed to the disgraceful state of affairs in Longue Pointe Asylum that a strong interest is still felt in knowing what progress (?) is being made towards ameliorating the condition of its unfortunate inmates. After the exposure by Dr. Tuke, the Provincial Government took the matter up and passed an Act in June 1884, the most important provision of which consisted in placing the entire medical management of the institution in the hands of a medical board, to be appointed by the Government. This board was to govern the admission and discharge of all patients, to be responsible for the classification of patients, to make all rules and regulations for their moral and physical management, and to assume the medical treatment of all cases. Under this act, Drs. Perrault and Duquet were nominated to act with Dr. Henry Howard. As soon, however, as this was done, the "fair Pharaoh whose heart was hardened" appointed Drs. Durocher and Prieur to perform the duties above detailed. When the Government officers presented themselves in order to carry out the instructions of the Executive, they were politely informed that Sister Teresa had no use for them; she had

medical men of her own. Hard as it may be to credit, it is nevertheless true that, in the face of the Act quoted, for months past, the entire management of this great Government institution, containing nearly one thousand lunatics, has been looked after by two nominees of the nuns themselves, and the Government has looked helplessly on, quietly submitting to be openly defied by this bold Mother Superior. The nuns claim that they have the right to appoint their own medical attendants under their contract. We cannot but believe that the law officers of the Crown are satisfied that the Provincial Parliament had power to pass the Act of June 1884. If so, it is clearly the duty of the Government to see that its provisions are carried into effect, and, in the interests of humanity, we call upon it to do so. The law was passed in response to a great outcry on the part of the whole people, and because the necessity for such legislation had become imperative. How is it that any individual or number of individuals can thus set themselves above all law, and above the deliberate wishes of the people as expressed by their parliamentary representatives? How is it that no reform whatever can be carried out in the asylums of this province? Dr. Tuke found us in this respect a hundred years behind European and American countries, and perhaps equally so behind our very neighbor of Ontario. Are we forever to remain so? Are we forever to be a byword and a disgrace amongst peoples? If not, let the Government exert its strong arm, and let us for once see vigorous action taken to enforce the right.

The International Congress.—It is well known in this country that Dr. R. P. Howard, Dean of the Medical Faculty of McGill University, was appointed by the original committee of the Congress one of its Vice-Presidents. It was a graceful act on the part of our neighbors to place a leading member of the Canadian profession in this post of honor. When the trouble arose following upon the meetings of the American Medical Association at New Orleans and of the newly-appointed committee at Chicago, no action was immediately taken by Dr. Howard or by any of those Canadians appointed upon the sec-

tions. It was well understood, however, that they did not approve of the ousting of the old committee or the action taken by the new. Dr. Howard, when directly appealed to to state whether he accepted the position, felt obliged to send in his resignation, which he did some weeks ago.

—It is now some time since a committee of the Board of Health was named to enquire into the origin and early spread of the smallpox in this city. This is a matter of great general importance, and one on which we have already expressed an opinion. We hope that this committee is at work and will shortly give us a full report. All the facts of the early stages of the outbreak should be clearly stated, and the lesson might then be learnt how, under similar circumstances, to avoid such a dire calamity as this year befel our city.

Smallpox at Longue Pointe.—Smallpox broke out some weeks ago at Longue Pointe Insane Asylum—how many weeks ago we do not know, information on points of that kind being unattainable. There are eighteen cases and there have been four deaths. We have been informed that all the latter were unvaccinated. Three months ago, the nuns were ordered by the Central Board of Health to have the inmates vaccinated. It seems, however, that nothing effectual was done until the outbreak, months afterwards. The work was then performed by the physicians in the employ of the nuns—the Lady Superioress, the now-becoming-well-known Sister Teresa, having snapped her fingers at the law, the Government, the Central Board, and every other body, organization or individual claiming to exercise any authority over her. It remains to be seen how quietly our good Government will sit under this new affront—an affront offered both directly to itself and also to the Provincial Board, whose mandates it is bound to have enforced.

The Insane in the United States and Canada.—We have received Dr. Tuke's latest book bearing this title, and have derived much profit from its perusal. When the author came to this country with the British Association, his chief object was to familiarize himself with the system under which the insane were managed in these Provinces and in the various States of the

Union. A lifelong alienist, whose name is a household word amongst the profession, and whose opinions command all the respect such a record deserves, every facility was afforded him for the accomplishment of his purpose. Canada was visited, and, finding in this Province a state of things calling loudly for immediate reform, he published in this JOURNAL (subsequently copied by the daily press) an account of what he saw and what he would suggest to remedy the evils only too evident. This narrative is included in the present work, together with similar details concerning the asylums of Ontario. These are of the deepest interest to the Canadian profession, and should be widely read. The bulk of the volume, however, is composed of Dr. Tuke's observations on the American asylums, with some comparisons between the treatment there and in model European institutions. It will be found that the scrutiny shows nothing of which the people of the United States need be ashamed. Indeed, in this respect, their civilization reaches a high order. We hope that, as asylum matters here seem likely to again attract considerable public attention, Dr. Tuke's book will be studied by every physician, for it contains the thoughtful statements of one who is, with reason, looked upon as the most experienced and the most reliable authority in England on all subjects connected with asylum management.

THE SOUNDS OF THE HEART.

It has been urged that the heart contraction, being a sort of single muscular twitch, could not, in consequence, produce a sound, for it was known that the voluntary contraction of a skeletal muscle caused a sound corresponding to 36–40 vibrations per second; and this latter, indeed, was considered as evidence that a "tetanus" or summation of single contractions was always produced when a voluntary muscle contracted.

Prof. G. Yeo and Mr. Herroun, working in concert, have greatly shaken this doctrine. They found, on submitting a voluntary muscle to stimuli, interrupted 10, 15, 20 or 25 times a second, the "susurrus" arising was in each instance the same, and that this corresponds to the so-called muscle tone. It would appear from this, then, that the tone heard over a contracting

muscle does not correspond necessarily to any *definite* number of vibrations of the muscle, but to certain regular or irregular motions of the same, giving rise to vibrations of the membrana tympani. If this be true, one objection to the first sound of the heart being of muscular origin is removed.

Prof. Yeo and Dr. Barrett have instituted some experiments at King's College physiological laboratory in order to ascertain whether Halford's statement that the first sound of the heart ceases when the great veins of the heart are clamped is true. These observers, using a binaural stethoscope, after opening the chest of an animal (dog), exposing the heart, compressing the great veins, and allowing the heart to empty itself, still heard the first sound, though less forcibiy than before. The heart was then removed from the body and held in the hollow of the hand, surrounded by warm weak salt solution. It beat vigorously and the first sound could be heard fairly well. Again, all but the apex was cut away ; the tip of the forefinger was placed in its cavity (left ventricle), and a stethoscope applied. Still a sound corresponding to the first could be heard.

Prof. Yeo attempted to demonstrate the above before the Physiological Society of England, and while several observers agreed as to the identity of the sounds, some, including one able investigator, objected to the method as fallacious.

It is plain that before long we may expect an improved heart physiology.

ANNUAL DINNER OF McGILL MEDICAL UNDERGRADUATES.

The medical undergraduates, with the professors and benefactors of the University as their guests, assembled in the Ladies' Ordinary of the Windsor, Dec. 3rd, to exchange mutual felicitations on the occasion of their annual dinner. The room was tastefully decorated and the tables ornamented with flowers and plants. The attendance of students was large, and the dinner altogether an enjoyable event.

Mr. R. A. Kennedy, B.A. '86, occupied the chair. On his right were seated Dr. R. P. Howard (Dean), Prof. Johnson, Prof. Bovey, Mr. John Dougall, Prof. Girdwood, Dr. Munro, Prof. Stewart, Prof. Wilkins, and Dr. T. Wesley Mills. On the left were the Hon. Justice Torrance, Mr. Andrew Robertson, Mr. G. W. Stephens, M.P.P., Dr. Anderson (U.S. Consu

General), Dr. McEachran, Dr. Roddick, Dr. Shepherd, Prof. McLeod, Dr. R. L. MacDonnell, Mr. Therrien, Victoria University, Dr. Rodger, Dr. Ruttan, Mr. McVety, Kingston, Mr. Dickson, Toronto, Mr. Lemming, Toronto, and Mr. Longeway, Bishop's College.

The vice-chairmen were Messrs. W. J. McCuaig, T. J. Norman, and J. G. McCarthy.

Letters of regret were read from the Governor-General, Lieut. Governor Masson, the Dean of Trinity College, Toronto, and several others.

When the cloth had been removed,

The Chairman extended to the Dean and guests the welcome of the medical undergraduates. It was the fourth annual dinner at which the students and professors had met together around the same festive board, and his only regret was that many of those who had been invited were unable to avail of the invitation. He proposed the toasts of "the Queen," "the Governor-General," and "the Lieutenant-Governor," which were loyally and enthusiastically received.

Mr. T. G. McGannon, in proposing the toast of "the President of the United States," said that the people of Canada sympathize with the people of the United States in the loss they had sustained through the death of Vice-President Hendricks. He referred to the amicable relations which existed between Canada and the United States, and he trusted that the good feeling would long continue.

Dr. Anderson, Consul-General of the United States, responded. He said that these manifestations of such great good will on the part of Canadians for the President of the United States was most gratifying, and if he were not in an official position he might think that the friendly feelings to which the proposer of the toast referred might become so strong that Canadians might some day put it at the head of the list without any fear of disloyalty. Referring to the smallpox epidemic, he said that soon after its appearance in Montreal the edict went forth from Washington that travellers from Montreal should be quarantined. He thought that after this extreme measure the toast of "the President" would be coldly received, but he found that the toast was so well received at the dinner to the gallant Col. Straubenzee, that it looked as if a portion of a fourth of July audience had broken loose in the banquet hall of the Windsor. (Laughter.) He had continued to find the enthusiasm manifested at several dinners since then, and he was deeply thankful on behalf of the Chief Magistrate of the republic for the evidence of good feeling. (Applause.)

Mr. Orton proposed the toast of "Our University." He referred to the high status of McGill amongst the educational institutions of the world.

Prof. Johnson, in the absence of Principal Dawson, replied. With the exception, said the Professor, of the Nova Scotia University, McGill was the oldest university in Canada, and it therefore merited in some degree the affectionate term of "Old McGill." But although McGill was somewhat old in years it was young in vigour and young enough to make strides in progress, and McGill was making progress thanks to one generous benefactor, and, with the assistance of others, a splendid addition had been made this year to the medical school. He was glad to find that, in spite of the fear of the smallpox epidemic,

the attendance of students was larger this year than any other—numbering, he believed, over 500. But the progress noticeable in the interior of the College was even more gratifying. Formerly the students of one faculty hardly knew the students of another, but now all had extensive opportunities of social intercourse—a matter which was of great importance to the University and to the students themselves. There were now more students who went from arts to medicine than formerly. But there was yet a great field of progress before the University, and this was all the more apparent when they saw the munificent donations for university purposes from private individuals in the adjoining states. Only very recently it was announced that one rich man had given about $20,000,000 for a university in California. This might seem an enormous sum, but it was nothing compared to the endowments of Oxford, and yet Oxford needed more money. The people of Montreal were, indeed, not behindhand in princely munificence to McGill, but he mentioned these facts to show that every penny that could be obtained for the University could be well expended in promoting the interests of education in Montreal and in Canada.—(Applause.)

Hon. Justice Torrance, one of the governors of the University, also responded. He was an old student himself, having begun his University career over fifty years ago. He knew something of medical students, for he was in Edinburgh University himself, and he had hearty sympathy with the medical undergraduates. To the young men he would say, "Do not be in too great a hurry for success, but stick to the ship, and some day you will be wanted." He would also remind them of the words of Astley Cooper, "Do justice to your profession, and one day, rely upon it, your profession will do justice to you." In conclusion, the Judge believed that he could not do better than remind the students of the words of a celebrated Frenchman, "You must never feel discouraged; success will come suddenly." (Applause.)

Mr. W. D. Stewart proposed the toast of "Our Benefactors." No toast, he said, should be more cordially received by the students of McGill, for the gathering around the festive board that evening was indirectly due to the liberality of "our benefactors." To them was also due the prestige of McGill which attracted students from British Columbia to Newfoundland, and even from England. The princely generosity of Donald A. Smith to McGill would be remembered as long as there was an educational establishment in Canada, and in the days to come those whose names were associated with his would be no less honored and respected. (Applause.)

Mr. G. W. Stephens, M.P.P., in replying to the toast, referred to the time in the history of McGill College medical dinners when the annual banquet was held in the second story of a grocery store on St. Urbain street, and when the *menu* was grilled bones with plenty of pepper and a glass of beer. (Laughter.) McGill was represented in all parts of the globe by active, able and intelligent men, and from the past records of the College he was sure that the students of the present day would distinguish themselves as those of the past had done. On behalf of the benefactors, he assured the students of their interest and anxiety for their welfare. They felt, however, that in giving donations they performed the least part of the work, for were it not for the Dean and men like him who preceded him, McGill would not occupy the high position it did to-day. (Applause.)

Dr. McEachran embraced the opportunity to reply to the toast, not as a benefactor, but with a sense of obligation for the benefits which the profession and the Veterinary College derived from McGill University. He was proud of the gradually growing mutual friendship

and esteem between the medical and veterinary professions. He believed there was no profession which received less remuneration for its services than the medical, considering the time, the care and the study it required, but he trusted that the *alumni* of McGill would always look to the high motive of benefiting their fellow man rather than of making money. (Applause.) If this principle were carried out, and the work honestly and conscientiously performed, then, in the words quoted by Judge Torrance, success would come some day, and, perhaps, suddenly. (Applause.)

Mr. J. A. Porter proposed the toast of "the Dean and Professors," which was cordially received. He referred to the kindly interest taken by the professors and the students, and the esteem of the students for their worthy Dean and professors.

Dr. Howard, Dean of the Faculty, who was heartily greeted, responded. He said he had always been a medical student, and he hoped always to be a medical student, and nowhere did he feel more at home than at those annual dinners. The professors felt that they had the regard as well as the confidence of their students, and unless they felt this many would disregard the arduous work of teaching and apply themselves to the more lucrative one of practising their profession. The sacrifices made by the professors implied a love of work, and to love the work they must love the young men amongst whom they worked. It was a feeling of pride to the professors to know that they were educating young men into one of the most noble professions, and he believed it was admitted on all sides that the students loved the professors and that the professors loved the students. (Applause.) He spoke the sentiments of every professor present when he said that the professors accepted the toast in the spirit of affection with which it had been tendered. Referring to the changes which had taken place in the medical staff of the University, he said that out of what seemed to be a great evil had arisen a great good, for the one department had been enlarged into three departments, and in the enlarged building the new teachers, he was glad to say, were doing excellent work. (Applause.)

Dr. Girdwood, replying, said he was deeply grateful for the enthusiasm with which the toast had been received, and he took it as an evidence of the respect and esteem which the McGill students always entertained for their professors. Whatever might be said of the professors and the benefactors of McGill, yet it was the students who made the University and who carried its good name and prestige all over the world.

Prof. Roddick, Prof. Stewart, Prof. Shepherd, Prof. Wilkins, Dr. Mills and Dr. Ruttan also responded. They referred to the good feeling between the professors and the students, and expressed much pleasure at meeting their pupils around the same table.

Mr. J. F. Williams proposed "the General Hospital," coupled with the name of Mr. Andrew Robertson, President of the Board of Governors. Mr. Williams referred to the excellent management of the hospital, and the facilities it afforded to the McGill students to obtain a practical knowledge of the details of their profession. He trusted that the building would soon be improved.

Mr. Andrew Robertson, in reply, said that if the proposer of the toast was not satisfied with the buildings of the General Hospital, neither did he like them. (Hear, hear.) For twelve years he had in his mind the enlargement of the building, and his predecessor, Mr. Peter Redpath, had the same idea before him. They had now the ground for the buildings and a little money, but they wanted more

money, and he hoped they would soon get the plans. He was reminded of the story of the clergyman who preached the following charity sermon: "He who giveth to the poor lendeth to the Lord, and if you like the security you had better put down the cash." So it was with the citizens of Montreal—if they liked the security in building up a hospital worthy of the city of Montreal, let them put down the cash. In conclusion, he would remind the students of the words of the American poet:—

"In the world's broad field of battle,
In the bivouac of life,
Be not like dumb, driven cattle;
Be a hero in the strife.

Let us then be up and doing
With a heart for any fate.
Still achieving, still pursuing—
Learn to labor and to wait."

—(Applause.)

The toast of the "Sister Universities" was proposed by Mr. J. A. Dickson, and replied to by Messrs. Lemming, McVety, Longeway and Therrier.

"The Graduates" was proposed by Mr. DeCow, and responded to by Dr. Rodgers.

"Class '86" was proposed by Mr. Lafleur, and responded to by Mr. Bradley. The toasts of "the Ladies" and "the Press" were suitably honored.

The health of the Chairman was then proposed and enthusiastically received.

Correspondence.

To the Editor of The Canada Medical & Surgical Journal.

Dear Sir,—I am very sorry to see the spirit of your editorial copied into the *Medical Record* of the 19th December, more especially so as there has been an era of good feeling between the medical profession of the United States with those of the Dominion, and also between the two great representative medical societies of both countries. You seem to take it for granted that because the "tone of the great medical weeklies of the eastern cities show very plainly that there is still war between the adherents of the old and new committees," that such a condition exists. The additional committee made by the American Medical Association at its late annual meeting in New Orleans held their first meeting in Chicago. The original committee were invited to be present to take part in the deliberations. Three were present, but because the action of the majority did not suit them they resigned. The additional committee have gone on and perfected the arrangements for the Congress, and placed the whole matter in the hands of an executive committee to complete details.

"The great medical weeklies of the eastern cities" have done nothing in aid of the Congress, and thus far have done everything in their power to kill it (I may except an editorial

in the *Medical News* of Philadelphia of the 12th instant). Could you travel through this country you would be surprised to find what little influence these "great weeklies" have had over the medical profession in reference to the International Medical Congress. The "quarreling" you refer to lies with the editors of the "great weeklies" and a few of their special friends, who had assumed to themselves that *they* were the American medical profession when they only formed the six hundredth part. You say: "To attract the workers of other countries the sections must be controlled by the men most eminent in their respective departments (eight, so far), but the present officers of sections, with few exceptions, do not reach beyond a respectable mediocrity." I venture to assert that the names of the gentlemen placed by the Committee at the head of the sections are the peers of any member of the profession in the United States, and there is no one even in the great Eastern cities that will dare to throw down the gauntlet to the contrary. I deeply regret such a comparison should come from the profession of a neighboring country; but perhaps the "great weeklies" of our neighbors do not any more represent the profession there than ours do here—especially in the matter of the International Medical Congress. You say if certain things cannot be done, "give it up." I can assure you this advice will not be heeded—the American people never *give anything up;* neither will the *medical profession give up the Congress.* The American Medical Association, speaking for the medical profession, invited the Congress to meet in Washington. The invitation was accepted. The American Medical Association will see that all arrangements are made for its reception in its own way, and I can assure you and the medical profession abroad that the most perfect and elaborate arrangements will be made for their reception, and it will rest solely upon themselves whether they will be present to attend and aid in making the Congress more instructive and more useful than any before.

Yours respectfully,

WM. BRODIE, M.D.

64 Lafayette Ave., Detroit, Mich.

Obituary.

—The sudden death of Dr. Marsden of Quebec, immediately after his return from attending a meeting of the Quebec Central Board of Health at Montreal, has caused a deep and widespread sorrow throughout this province. Dr. Marsden was born in Lancashire, England, in 1807, and came to Quebec in

1812. He began his medical studies in this country, and completed them in London and Paris. For the past thirty years he has occupied a prominent and honorable position among the physicians of Quebec. Before the incorporation of the Quebec Medical School and Laval University, he delivered courses of lectures on Anatomy, Physiology and Surgery. He has been an extensive contributor to the medical press of the country, his work on "Cholera" being the most important of these. He occupied the position of President of the Canadian Medical Association in 1874. For many years he was President of the College of Physicians and Surgeons of Quebec, of which he was senior Governor. He was also an honorary Fellow of the Botanical Society of London, a corresponding Fellow of the Medical Society of London and of various other learned and scientific bodies. At the time of his death he was an active member of the Quebec Central Board of Health. He was indefatigable in his efforts to prevent the smallpox from spreading to Quebec, and for the enforcement of means of preventing its ravages in this city. Dr. Marsden's death is a great public loss.

Dr. A. H. Smith, one of America's distinguished obstetricians, died at his home in Philadelphia, on the 14th December, after a long and painful illness. Dr. Smith was born in 1835, and was consequently fifty years of age,—and, although a comparatively young man, he has done a great deal for the advancement of his own particular specialty. He is best known abroad as having made a very important modification of Hodge's pessary. He was one of the founders of the American Gynæcological Society, and was its president at the ninth annual meeting held last year. His death is sorely felt by those who knew him. Honest and modest in all his work and ways, he has passed away regretted; but his influence will long live to stimulate to good work those who knew his worth.

Medical Items.

—J. B. Lawford, M.D., McGill, 1879, having passed the final examination in November last, was admitted to the Fellowship of the Royal College of Surgeons of England on Dec. 10, 1885.

—Dr. Wm. Stephen has gone to practice his profession in South America. He sailed from Liverpool a month ago, and will fix his residence at Rosana, Argentine Republic.

—The *Johns-Hopkins University Circular* for October, 1885, contains in abstract three papers by Dr. T. W. Mills,

Lecturer on Physiology, McGill University. The first of these is on "the Rhythm and Innervation of the Heart of the Sea Turtle." This is a continuation of Dr. Mills' work on the physiology of the chelonian heart. The second is on "the Physiology of the Heart of the Alligator." This is, with the exception of a short paper by Gaskell on "the Crocodile," the first published observations on the heart of this group of animals. Dr. Mills has, as the result of his investigations into the *Crocodilia*, come to the conclusion that the vagus is a powerful cardiac augmentor, at least in the alligator. The augmentation in the force of the beat is more marked than acceleration in the rate. In the third paper an account is given of the action of certain drugs on the cardiac rhythm of fishes. Dr. Mills' experiments promise to be fruitful in results.

An Indiscreet Doctor.—Dr. Haywood Smith, the well-known and highly esteemed London physician, was unwise and imprudent enough to allow himself to be inveigled into the Armstrong case by Mr. Stead. He chloroformed the girl, examined her, and certified to Mr. Stead that she was "pure." The English medical press naturally condemn his action, and the British Gynæcological Society have accepted his resignation as secretary, expressing their thanks at the same time for the distinguished services he has rendered to this Society, and affirming "their belief that in what he did in reference to the Armstrong case he was actuated by what he believed to be the highest motives, while committing a grave professional error."

Salicylate of Quinine.—In certain cases of subacute or even chronic rheumatism, and in some cases of acute rheumatism where salicylate of soda has proved ineffectual, M. Vulpian has substituted the salicylate of quinine in the same doses. The deafness, headache, etc., are less marked and the effect is much more satisfactory.

The Support of Quackery.—"Charlatanism," says Dr. Holmes, "always hobbles on two crutches—the tattle of women and the certificates of clergymen."

—A question in Medical Jurisprudence: How are the sinews of war connected with the bone of contention? and how do these affect the musselmans?

—"Luminous doctors' signs are prominently advertised in the pages of a contemporary. That is just the kind of doctors who run the least to such things. As a rule, it is where the "inward and spiritual grace" least abounds that there is the greatest ostentation of the "outward and visible sign."

CANADA
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Original Communications.

SKETCH OF THE EARLY HISTORY OF ANATOMY.*

By FRANCIS J. SHEPHERD, M.D.,
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The origin of anatomy, like that of many other sciences, is lost in the mists of ages. The embalmers among the Egyptians must have had some rude knowledge of the human frame acquired in their process of preserving the dead, but, as they belonged to the lowest class, and were abhorred and despised on account of their occupation, what rough knowledge they may have got concerning the arrangement of the internal organs was kept secret, and so not used for the general good of the community.

It has been asserted by some that the Greeks of the time of Homer were well acquainted with anatomy, and that Homer, in describing wounds, showed an accurate knowledge of the structure of the human frame; but the fact is, that the terms used by Homer were then the common ones employed by the people, and had no exact scientific significance. In later times these same terms were used by all anatomists in special treatises on the subject, and conveyed a certain definite meaning; thus Homer's knowledge appeared much greater than it really was. Eusebius states that Athotis, a traditionary monarch of Egypt, wrote several treatises on anatomy. Hamilton, who wrote a

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History of Anatomy and Medicine in the first quarter of this century, speaking of this tradition, quaintly remarks that " when we learn that the æra assigned to this fabulous monarch by the wild and improbable chronology of the Egyptians would carry us back to an age prior by many centuries to the formation of Adam, we can easily estimate the degree of credibility to which such a fable is entitled." Acmæon, who flourished some time before the advent of Hippocrates, paid considerable attention to anatomy, and is said to have made dissections, principally of the lower animals. Among other things, he asserted that goats breathed through their ears.

Hippocrates, who lived four or five hundred years before the Christian era, and who has been called the Father of Medicine, was the first individual who wrote a work on anatomy; his knowledge of anatomy was superficial and often most erroneous, and probably rested more on shrewd analogical conjecture than on actual observation. He, however, had a fairly accurate acquaintance with osteology. It is asserted by Pausanias that he hung a bronze model of a skeleton in the temple of the Delphian Apollo as a testimony of his own knowledge and for the instruction of posterity. It is highly improbable that he ever dissected a human body.

Diocles of Carystius, who lived a century after Hippocrates, and who is called the second Hippocrates, is said to have devoted much of his time to the study of comparative anatomy. He did not, as was the custom in those days, make a secret of his anatomical knowledge, but taught publicly, and was the first to write a manual of Dissection of Animals, an art, previous to his time, confined to a few families, and handed down from father to son by oral instruction. Diocles also wrote on Cookery, and held it to be as much a science as that of medicine—an opinion with which Plato altogether disagreed.

It is with the appearance of Aristotle, the preceptor of Alexander, that we must first date the systematic cultivation of the science of anatomy. To him, without doubt, should be awarded the credit of having founded Comparative Anatomy. Many of his admirers, without much reason, claim for him an

intimate knowledge of human anatomy; that he dissected animals is no doubt true, and also that he had a marvellously accurate knowledge of marine animals, but to say that he was a profound anatomist is absurd, and is not substantiated by what we find in his writings. For instance, in his writings he states that the kidney of man resembles that of the ox (which consists of many reniform bodies), and is not smooth like the sheep, that the human uterus is double, that the back part of the skull is empty, that the brain is without blood, and many other things equally absurd. His knowledge of osteology was also limited. He asserted that man had no astragalus (a bone in man forming the keystone of the arch of the foot), "neither," he says, "have many-toed animals, nor solid-footed animals." Now this bone is never absent in mammalian animals with limbs, and it is evident that Aristotle never looked for it, but asserted that these animals were without it on theoretical grounds alone, for in one of his works, "*De partibus Animalium*," he gives elaborate reasons why certain animals have no astragaloid bones. He also stated that the bones of the lion had no marrow, and that the necks of wolves and lions consisted of a single bone and had no flexibility. These points he could easily have made clear by actual examination. He, like Hippocrates, thought that nerves, ligaments and tendons were the same thing; he gave, however, a fairly accurate description of the great blood-vessel, the aorta, and distinguished the windpipe from the gullet; he also had some acquaintance with the structure of the larynx, and knew that the ear and throat communicated. No doubt Aristotle, for his time, was a good comparative anatomist, and some of his observations are valuable, but he so mixed up his facts with fiction that it is not easy to separate the one from the other. He was the first to write a treatise on Comparative Anatomy.

Plato, although he did not study anatomy practically, frequently refers to it in his writings. His references represent, no doubt, fairly well the condition anatomy and physiology had reached in his time, for all philosophers were supposed to know much of physic, under which anatomy was included, but sup-

position and assertion are so substituted for facts that his anatomy appears nearly altogether fanciful and imaginary.

The name of Praxagoras of Cos, the last of the family of the Asclæpiadæ (B.C. 341), has been handed down as the individual who distinguished the arteries from the veins, and who first asserted that the arteries were air-tubes (hence the name ἀρτηρία), an opinion which was held for several hundred years by his successors, and to which I shall refer later on.

Up to this time all knowledge of anatomy had been acquired from the dissection of the lower animals, but we now enter upon a new era of great and rapid progress in anatomical knowledge.

In the division of the empire which took place on the death of Alexander (323 B.C.), Egypt fell to the lot of Ptolemy Soter. He and his successors, Philadelphus and Euergetes, ardently encouraged the study of letters and the sciences. At Alexandria, a great library was established and a school of philosophy founded.* Alexandria, under the fostering care of the Ptolemies, soon outstripped its many rivals not only in literature and science, but in wealth and commerce. Learned Greeks, glad to escape from the dissensions of their native states, flocked to Alexandria, where they were sure, not only of protection, but of a hearty welcome; thus whilst the rest of the civilized world, distracted by intestine troubles and ravaged by frequent foreign wars, was fast sinking into a state of semi-barbarism, the Egyptian Greeks, protected by the wise and peaceful government of the Ptolemies, not only kept alive the flame of literature and science, but added not a little to its volume. The Alexandrian School of Medicine, participating in the general prosperity and advance, attained a renown far exceeding that of any school which had previously existed, attracted pupils from all parts, and produced many emi-

* Ptolemy founded the Museum (or University) of Alexandria, which was an establishment for the cultivation of literature and science. To it were attached botanical and zoological gardens for the purpose of practical study. One of the most important features of the Museum was its public library, which was supported with the greatest liberality; whenever manuscripts of acknowledged merit were offered for sale, they were immediately purchased, and the whole known world was ransacked for curious and useful MSS. The list of teachers in the Alexandrian school includes such names as Euclid in Geometry, Strabo and Eratosthenes in Geography, Archimedes in Physics, Hipparchus and Ptolomæus in Astronomy, and Erasistratus and Herophilus in Anatomy and Physic.

nent physicians. Among these were two who did more than any previous individuals to advance the science of anatomy. These men were Erasistratus and Herophilus. They both wrote large works on anatomy, which are, unfortunately, lost, but from which Galen, Oribasius, and others quote extensively. Herophilus and Erasistratus were probably the first who ever dissected the human body, for Philadelphus and Eurgetes gave orders that the bodies of all criminals should be handed over to the School of Anatomy for dissection. Thus at this early period, when the dissection of a human body was looked upon with horror and as an act of desecration, the enlightened and far-sighted Ptolemies, in spite of vulgar prejudices and religious scruples, enabled the School of Medicine of Alexandria to make a great stride forwards in learning, knowledge and reputation. It is said that Herophilus dissected 700 bodies, and that both he and Erasistratus made a common practice of opening living bodies in order to discover the origin of life. Tertullian, a learned father of the Church, who lived at the end of the second century, charges Herophilus with this crime; he says, "Herophilus, that physician, or rather butcher, who dissected 600 men in order to find out nature, who hated man in order to learn the structure of his frame, could not by these means come to a more perfect knowledge of his internal structure, since death produces a great change in all parts so as to render the appearance after death different from what it was before, especially since they did not die a natural death, but expired amidst all the agonies to which the curiosity of the anatomist was pleased to subject them." Celsus, who lived about 20 B.C., also says that Herophilus and Erasistratus vivisected human beings; he mentions it incidentally, as if it were a well-known fact, and does not appear at all shocked at such a proceeding. It is very probable that these anatomists did occasionally vivisect a criminal, since human life in those days was considered of little value, and the people were accustomed to see criminals cruelly tortured before being put to death, so that *vivisection* would, perhaps, be regarded with less horror than *dissection* of a dead body. It is the custom of historians to attribute these charges against Herophilus and Erasis-

tratus to blind and ignorant superstition, and to utterly repudiate them as unworthy of belief, but for the reasons given above the story seems to me a very probable one.

Herophilus, whether the charge against him of vivisecting human beings be true or not, was an able physician, an accomplished anatomist, and a learned man. Galen says of him, "He was an accomplished man in all branches of physic, excelling particularly in anatomy, which he learned, not from the dissection of beasts alone, as physicians usually do, but principally from that of men." He discovered the lacteals and the pulmonary artery, and described correctly the liver and organs of generation; he also described the blood-vessels, and a large blood cavity in the skull is, to this day, called the "Torcular Herophili." It is said that he was the first one who operated for cataract by removing the crystalline lens. Gabriel Fallopius, one of the most distinguished anatomists of the 16th century, said that he would almost as soon think of contradicting the Gospel as the authority of Herophilus.

Erasistratus is supposed to have been a contemporary of Herophilus, and to have flourished in the reign of Seleucus (B.C. 300). He was an able anatomatist, and accurately described, for the first time, various parts of the human frame, as the brain, nerves, valves guarding the orifices of the heart, etc. He it was who first divided the nerves into motor and sensory. He believed that the arteries carried air and the veins blood, also that the only use of respiration was to fill the arteries with air. This has been adduced by some as evidence that he had never vivisected human beings, for had he done so, say his defenders, he must necessarily have found out that the arteries were full of blood, but, as I shall show later on, this argument can have no weight.

Erasistratus was much opposed to bleeding and purgatives, and treated his patients solely by diet and regimen. He condemned strongly complex prescriptions, and, in fact, left everything to nature; he might with truth be called an "expectant physician." Herophilus, it is said, held opinions in physic diametrically opposed to those of Erasistratus, and believed in actively interfering with disease.

From the time of these two anatomists to that of Celsus little was done to keep alive the science of anatomy. Celsus, who lived towards the end of the last century before the Christian era, gives in his works, which are valuable repositories of the medical and surgical knowledge of his time, fairly accurate anatomical descriptions, but he himself does not seem to have done any original work in anatomy.

The first Roman anatomist whose name has been handed down to us is Marinus, who, according to Galen, described the muscles accurately, and also mentions the mesenteric glands. Soon after Marinus, Ruffus of Ephesus, a Greek physician, appeared. He vivisected animals and devoted himself to physiology and comparative anatomy; he made some discoveries regarding the abdominal viscera, and especially the uterus.

Of all the physicians of antiquity, none attained to so great a fame as Claudius Galenus of Pergamus. His reputation is deservedly great, for none did so much as he to advance the knowledge of physic. He was born A.D. 130, and was educated by his father Nicon, a mathematician of repute, as well as an architect and astronomer. Nicon early initiated his son into the mysteries of Aristotle's philosophy, but Galen also studied philosophy in the schools of the Stoics, Academics, Peripatetics and Epicureans. With the exception of the Epicureans, whose doctrines he utterly repudiated, he is said to have taken from each what he thought to be the most important part of their systems. At the age of seventeen he began the study of medicine; he soon outstripped his teachers, and early exhibited proofs of the greatest ability. His renown spreading abroad, he was brought to Rome by the Emperor Aurelius, and in that city he practiced till his death at the age of 90 years. Over his contemporaries he acquired great ascendancy, and held the same position in the medical world that Aristotle held in the world of general science. For hundreds of years after his death his doctrines and opinions held sway, and his sayings were regarded as oracular. Few ventured to oppose his tenets, and up to the 16th century all the medical books were merely commentaries explanatory of Galen's work. If any one advanced

a new theory as to disease, or stated what he believed to be a new fact, it was quite sufficient to show that it was opposed to the opinion of Galen, to bring down shame and disgrace upon the heretical innovator. Although Galen studied, among other places, at Alexandria, it is very probable that his knowledge of anatomy was gained chiefly from the dissection of animals whose structure was supposed to come nearest to man, hence his anatomy is not always the most correct.

Previous to Galen's time, it was thought the arteries carried vital spirits or pneuma, and so convinced were the ancients of this "physiological fact" that, although they were fully aware that when an artery was wounded it bled, they used all their ingenuity and powers of reasoning to explain how it was that a tube containing air *should* bleed when cut. They held that the air first escaped through the wound and then blood came from the veins by communicating channels, to fill the vacuum. Galen fully exposed the absurdity of this belief, and, by experiments on animals, showed that the puncture of an artery by the finest needle immediately gave rise to hemorrhage, and that no discharge of vital spirits took place. He also placed ligatures on the arteries at two points, and demonstrated that the portion of the artery between the two ligatures contained only blood. The Alexandrian anatomists said: "Nature could not have made two kinds of vessels, both intended to contain blood." But Galen replied: "You might as well say that the several stomachs of ruminating animals were not all intended as the recipients of the food, but that one was meant for solids, one for liquids, and one for spirits; they are all the recipients of the same thing, but each, nevertheless, has its separate use. So it is with arteries and veins." (Galen's *Opera Omnia*, Vol. IV, p. 722; quoted by Dalton.) Galen could not explain why two sets of vessels existed to carry blood, but he knew both contained blood, and this he satisfactorily proved by experiment. He did not, as was then (and is now) too commonly the case, start a theory and endeavor to make the facts dove-tail into it, but founded all his theories on experiment and observation, as every true philosopher should. It is very improbable that there were any opportunities

at Rome for dissection of human bodies; for Galen advises students to visit Alexandria in order to study the human skeleton, and not to trust to book descriptions. It is evident Galen himself had few opportunities of studying even the human skeleton, for he expresses great delight and astonishment on one occasion when on his travels he had the opportunity of examining a skeleton which had been exposed by the washing away of the earth which had covered it.

Galen added but little to our knowledge of human anatomy, yet by his researches and arrangement he brought together all that was known up to that time, digested and systematized it, and made it the basis of a medical education. He was a good comparative anatomist, and most of his original descriptions are derived from the dissection of monkeys. His style is clear and correct, and there is not so much confusion as is seen in the authors preceding him. Many of the names he gave to different parts of the body, especially those about the brain, are retained to the present day.

With Galen's death anatomical science declined—nay, was almost extinguished. For many centuries the men that followed him looked upon anatomy as a completed science, and Galen's works on the subject were regarded as sacred and infallible. It is strange that in ancient times all the great names in anatomy are those of Greeks, the Romans, though rich in soldiers, statesmen, poets and orators, never produced any one who was great in physic or any of the sciences.

With the fall of the Roman Empire and rise of Christianity, all learning, especially that having its origin in Greece, declined, for it was thought by the Christians to be the cause of all heresies. Anatomy suffered with the rest, principally owing to the prejudice which existed against the dissection of the human body. Dr. William Hunter, in a lecture delivered over a hundred years ago, remarks that "when faith was thought to be all that was worth acquiring, and prayer almost our only duty, there was an end of liberal education and every ingenious inquiry."

From the second to the eighth century but little progress was made in anatomy. The names of writers in anatomy during this

period are those of mere compilers, such as Oribasius, Meletius, Theophilus, and Soranus; the last mentioned appears to have dissected the human subject, but he added nothing to what was already known.

About this time, what little of science and learning there was in Europe was transferred to Asia; this transference of learning and science from the West to the East is coincident with the capture of Alexandria, which was then one of the chief seats of learning. There the Saracens were first brought into contact with the literature of Europe. When the Northern Vandals overran Europe, they drove from it all that remained of learning and culture, and ignorance was universal. A few monks and quacks practised the healing art in a rude way, but anatomy was altogether neglected. The lamp of science was kept feebly burning by the Saracens, who, although at first despising learning, later encouraged it. The philosophers of the West found refuge in Asia, and were protected by the wise rulers of the Saracens.

It has been for ages a common belief that at the capture of Alexandria its huge library was committed to the flames by the conquerors, and all its treasures, both literary and scientific, destroyed. The only authority for this story is Abulpharagius, who flourished about the middle of the 13th century, nearly six hundred years after the capture of the city. He relates that John Philiponus, the celebrated peripatetic philosopher, requested Amrou, the Saracen General, to spare the celebrated library of the Ptolemies. The General referred the matter to the Caliph Omar, who replied, "If these writings of the Greeks agree with the Koran, they are useless and need not be preserved; if they disagree, they are pernicious, and ought to be destroyed." Abulpharagius goes on to state that the library, in conformity with this decision, was destroyed, and that the books furnished the Arabs with sufficient fuel to heat the baths of the city for six months. Now, in the various histories of the siege and capture of Alexandria, written soon after the event, no mention is made of the destruction of the library. Besides, it is well known that the destruction of such treasures would be utterly repug-

nant to the Mohammedan precepts, which distinctly declare that religious books of Jews and Christians should never be committed to the flames, and that works of profane science may be lawfully applied to the use of the faithful. In addition to this, the Saracens took a great interest in medicine, and it is even said that the prophet himself wrote a book of medical aphorisms. So it is most unlikely that the Saracens would destroy the numerous works on that science which were contained in the library. Again, it is well known that Alexandria preserved its reputation as a school of science for a considerable period after its change of masters. Possibly part of the library was destroyed previous to the capture of the city by the mob of Christians led by Archbishop Theophilus in A.D. 391, and the rest was gradually dispersed in various directions, as happened after the destruction of Constantinople. (*Hamilton, History of Medicine.*) The Saracens ardently encouraged the study of medicine ; the Caliph Almansor, the founder of Bagdad, offered large premiums to the translators of Greek works into Syriac and Arabic ; schools, hospitals and libraries were established in Bagdad, Cordova,* Seville, and other cities. At one time Bagdad has as many as 6,000 students. Soon a race of learned Arabians arose, who did much to preserve what had, up to that time, survived the sanguinary conflicts and destructive fires of the dark ages. In the department of medicine, chemistry and pharmacy are most indebted to the Arabians, and many terms employed by them are yet in use, as alcohol, syrup, julep, etc. Little or no progress was made in anatomy, as, owing to the strict rules of Islam, which declared him defiled who touched a dead body,† dissection was never practised ; nevertheless, they deserve credit for having preserved Galen's works, and in this way prevented anatomy from being altogether a lost science. Some anatomical terms remain as the only trace that anatomy was once in the keeping of the Arabians.

* Alhakem established an academy at Cordova which was frequented by all the Christians of the West. In the 10th century the library contained 224,000 volumes: and in the 12th century 70 public libraries existed in the parts of Spain subject to the Moors.

† The Mussulman faith taught that the soul did not take wing at once, but clung to the body after death, crept from limb to limb, and afterwards took refuge in the chest.

The era of Saracen learning extends to the end of the 13th century, when the empire, which was already showing signs of decay, was overthrown by the Ottoman. The Turks, despising learning, destroyed all the schools and abolished every kind of study in Bagdad, and from this time Europe again became the seat of the little learning that survived. There, the study of the Greek authors was encouraged, and a taste for literature and art was rapidly developed. The University of Bologna now begins to attract notice as a school of literature, medicine and law; in the 13th century it had over 10,000 students in attendance on its classes. In the early part of the 14th century, the chair of Medicine, which included anatomy, was filled by Mondino di Luzzi, called the Restorer of Anatomy; his is the first name of note in anatomy following Galen's. Mondino, in 1315, was fortunate enough to get Royal permission to dissect the body of an unclaimed female subject, the first human subject which had been legally dissected for more than a thousand years. One can well imagine the excitement which must have existed in the old University when it was announced that on a certain day a human body was to be publicly dissected. With what feelings of awe even students and physicians, who had never witnessed such a desecration of the dead, must have regarded the sight, and how such a mutilation of the sacred bodies of the dead would have aroused the animosities and prejudices, not only of the common people, but even the most highly cultured. Mondino himself was not entirely free from these prejudices and superstitions, since he declined to open the head and examine the brain in fear of committing mortal sin. (*Fisher.*)

Martianus, physician to Frederick II. of Naples, induced that monarch to grant permission to allow a public lecture on the actual subject at least once in five years. All the physicians and surgeons in the neighborhood were commanded by Frederick to attend these demonstrations. At these lectures the professor sat on a high chair, with the subject in front of him, and surrounded by his pupils. He demonstrated the various structures as they were laid bare with a huge broad-bladed knife or razor by the barber who was employed for that purpose. An engrav-

ing of such a scene forms the frontispiece of some of the editions of Mondino's Anatomy. It is said that Mondino dissected two female subjects, and shortly afterwards published a description of the human body, illustrated by rude engravings. The title of the book was "*De omnibus humani corporis interioribus membris Anathomia.*" This work was very little different from that left by Galen—in fact, most of the errors of the latter were perpetuated. The Government undertook the publication of Mondino's Anatomy, and the statutes of the University of Padua prohibited the use of any other anatomical text-book. Mondino's Anatomy existed in manuscript alone for 150 years, and first appeared in type in 1578, twelve years after the introduction of printing into Italy. It went through numberless editions, and for more than 200 years was looked upon as an authority. It is quite a small book of 175 pages, and gives a most superficial and crude description of the various parts of the body. It is full of inaccuracies, the arrangement is confused, and the meaning often obscure, still it was the best work in anatomy which had up to that time appeared. The first chapter shows how man differs from the animals; one difference is that man has no tail, "because, being naturally erect, he rests himself by the sitting posture, and a tail would interfere with his sitting down." His reasons for the erect posture are amusing. "First, man is erect because he is of a lighter, more spirituous, and ærial character; secondly, he contains a greater quantity of heat, which is naturally lifted upwards; thirdly, he has, among all animated creatures, the most perfect form, which he shares in common with the angels and the intelligences which rule the universe; and fourthly, the sense of sight, through which most of our intelligence comes, needs to be placed at the highest point of the body, like the sentinel on the watch-tower." (Dalton.) Mondino divided the body into three cavities: the upper (head), containing the animal members; the middle (thorax), containing the spiritual or vital members; and lower (abdomen), containing the natures. His description of the heart is singularly correct, and he seems to have had some notion of the uses of the valves, for he calls them *ostiola,* or little doors.

From the time of Mondino to the 16th century, there is little to relate about the progress of anatomy ; during that period most of the anatomists were blind followers of Galen, and learned nothing by actual observation. There were one or two exceptions, men who worked diligently and observed closely, though their opportunities were few and their minds still somewhat obscured by the mysteries of the Arabian school. Among these were Matthew de Gradibus, who first accurately represented the ovaries, and Achillini of Bologna, who discovered the small bones of the ear and also gave an accurate description of the brain and intestines.

Leonardi da Vinci, the great painter, was one of the first who gave an impetus to the study of anatomy by the introduction of anatomical drawings. He not only made drawings of human anatomy, but carefully and accurately described and figured the various parts of the anatomy of the horse whilst modelling his gigantic equestrian statue of Francesca Sforza. His anatomical drawings are still extant, and are very correct.*

(*To be continued.*)

NOTES ON A CASE OF ACUTE FEBRILE PEMPHIGUS.

By CHARLES E. GOODING, M.D., St. Philip, Barbadoes, W.I.

It having been my fortune lately to have under treatment a patient suffering from acute febrile pemphigus, I thought that a history of such a rare case might not prove wholly uninteresting to the readers of the Journal.

M. R., negress, aged 31, agricultural laborer, mother of several children, no miscarriages ; always enjoyed good health ; no specific history ; nothing special in family history. Sixteen days ago first noticed several small, slightly raised spots on her chest, which were attended with a moderate amount of itching. Feeling fairly well, she went about her work as usual, but towards evening became somewhat feverish, and complained of slight headache and general malaise. These symptoms gradually increased in intensity, but it was not until the end of a week

* Some are at Windsor Castle, others at the South Kensington Museum, London.

that she took definitely to bed. About a day after the spots were first noticed, small vesicles appeared on them, and these increased in size until, in a few days, they became large bullæ. During this time new vesicles began to show themselves between the old ones on the chest, and then successively spread to the abdomen, back, face, head, and, last of all, the extremities—in fact, over the entire body, except the legs, palms and soles. The bullæ, originally filled with clear fluid, soon became opalescent, then pustular, and finally burst, being replaced by large masses of scabs, from beneath and between which pus kept constantly oozing. Such was the account I obtained when called sixteen days from the beginning of the attack. The people being very poor, put off calling a medical man as long as they could.

On my arrival I stopped about ten yards from the door, and could even then notice a great commotion among the "carrion flies" which were congregated in large numbers outside the house. Their presence only imperfectly prepared me for the revolting sight which awaited me inside, for never in my life have I beheld anything half so loathsome. The stench when I entered the door was well nigh insupportable, being aggravated by the intense heat of a tropical sun. A human creature (though she was scarcely recognizable as such) was sitting on a stool in the centre of the room. Her face—so swollen that her features were scarcely distinguishable—was covered all over with crusts. Her body was in the same condition, only intensified. The entire surface was, or had been, covered with scabs. These were divided very symmetrically by cracks, giving the body the appearance of being enveloped in a coat of mail. Through the cracks a purulent discharge of a most nauseating odor was oozing. In some places (especially on the back) large masses of scabs had been detached, leaving raw, bleeding surfaces. The thighs and arms were found in a similar state, though to a less degree. Here the eruption could be beautifully seen in all its stages, from the small vesicle to the large pustular bleb and its subsequent scab. Some of the bullæ were as large as hen's eggs, discrete in many places, but in others coalesced to

form masses much larger. From the knees upwards, I doubt whether a piece of healthy skin could have been found large enough to place a shilling on. Considerable pain in swallowing was complained of, and the throat was found swollen and injected, while several dark patches, like bits of diptheritic membrane or superficial sloughs, were seen on the pharynx and about the base of the uvula. On detaching one of these, the membrane bled readily. The external genitals were also covered with crusts, and a highly offensive discharge was issuing from the vagina. At the time of my visit, the pulse was 122, temperature 103°½; bowels open; sleeps very little; slight nocturnal delirium.

I ordered all clothes to be removed from the patient, and for her merely to be covered with a fine piece of muslin to keep off flies, etc.; carbolized carron oil to be kept constantly applied; ammonia and bark internally, with brandy, and plenty of liquid nourishment at regular and frequent intervals.

17*th day*.—Condition much the same. Passed a very restless night. Ordered a sleeping draught of chloral and bromide.

18*th day*.—Slept better last night. Bowels very free. Sleeping draught repeated, and bismuth and Dover's powder for the diarrhœa.

19*th day*.—Diarrhœa moderated; otherwise condition unchanged.

20*th day*.—In spite of the utmost care, a large number of the crusts have been torn off the body. Diarrhœa returned, and she is much weaker.

After this, the diarrhœa resisted all efforts to control it, and she gradually sunk, dying from exhaustion on the 24th day.

Remarks.—The main peculiarities of the case are its acute course and rapidly fatal termination in a previously perfectly healthy individual. The rarity of the disease may be judged from the fact that its very existence is denied by many writers. The great Hebra is said never to have met with a case. I regard the patches in the throat as identical with the eruption on the surface of the body, their appearance being modified by their occurrence on a mucous membrane. I could not obtain

permission to make a post-mortem examination, but it would have been very interesting to see whether the gastro-intestinal tract was similarly affected. The marked diarrhœa would favor such a supposition. The fact of the mucous membranes being involved in pemphigus is not generally admitted, but this case, to my mind, goes far to prove it.

A PRACTICAL DEMONSTRATION OF THE CONTAGIOUS NATURE OF TUBERCLE.

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At the meeting of the Canadian Medical Association, held at Chatham in September last, the entire lungs of two rabbits which had been inoculated with tuberculous sputum, as well as portions of lungs of other rabbits, all showing tuberculous nodules, were exhibited. Ten microscopes were used for the demonstration, several of them with Abbe's condensor. The lenses used were Zeiss' homogenous $\frac{1}{18}$, $\frac{1}{12}$, and also dry systems magnifying from 120 to 600 diameters.

In drawing attention to the various specimens, the following remarks were made by Professor Wilkins :—

June 17, '83.—I introduced into anterior chamber of eye of two rabbits, by means of hypodermic needle, a tiny drop of sputum which I had previously ascertained contained numerous tubercle bacilli. This was taken from a patient who died shortly after of phthisis. I also introduced into anterior chamber of another rabbit a small quantity of fæcal matter from a typhoid patient.

June 22, '83.—In presence of Dr. Osler I inoculated five more rabbits with some fresh sputum from same patient.

The rabbit into whose eye I introduced the fæcal matter completely recovered from the effects within four days, leaving no trace of injury further than a few enlarged vessels at margin of cornea.

The other two rabbits had complete opacity of cornea within twelve hours, and in forty-eight hours the chamber was in a suppurative condition. Five days subsequent to inoculation the

cornea sloughed, and on the seventh day ulcer was three mm. in diameter.

Four of the other rabbits had complete opacity of cornea within fourteen hours. The other one, a large buck, had very slight opacity ; this had almost quite disappeared within forty-eight hours. In this rabbit, on the fifth day, I thought I could perceive some small tubercles on the iris. About the fourteenth day some slight enlargement of the glands at the back of jaw was perceptible. The glands of the other rabbits commenced to enlarge about the tenth day ; their temperature, which was taken only twice at this time, was 102° in the rectum. All, except the large buck referred to above, commenced to waste rapidly. Unfortuately, five of them met with a violent death, having been torn to pieces by dogs. I secured the lungs of two of these, and it is from one of these animals that I prepared the specimens for microscopical examination which I show you to-day. Another animal lived to die naturally in the ninth week. His lungs I now show you, completely covered with tuberculous nodules.

At about this time I killed the buck, who seemed to be but little affected, as far as appearances were concerned, and also his eating abilities. I wished to use him for normal histological purposes, consequently injected by the carotid a carmine gelatine mixture. I had not intended to utilize his lungs, as I thought the tuberculous inoculation had failed with this animal, but on taking them out I found them studded over, much to my surprise, with beautiful tubercles. These I show you now, with the tuberculous nodules uncolored, the injection mass not having entered on account of its non-vascular nature. The liver also contained a few tubercles, but I could discover none in any of the other organs.

In the other rabbits, I found tubercular masses in both liver and kidneys. Through an oversight, I did not examine glands in neck.

Besides the two lungs just referred to, I show you to-day, under the microscope, the sputum of hospital patient containing bacilli. These have been stained red, after Gibbes method. I

show you the lung of the individual by whom this sputum was expectorated. It has been prepared according to Weigert's modification of the Koch-Ehrlich process. Some portions of this lung are here shown teeming with bacilli. I also show you the lungs of two of the rabbits, containing exactly similar bacilli, prepared after the same method. The bacilli in this case have arrived here through the lymph path. In the anterior chamber of the cornea the bacilli found a suitable nutritive fluid and another most important condition: they were undisturbed, consequently developed rapidly. The lymph cells of the iris and vicinity carried them throughout the system, and permitted them to germinate in those localities in which they found a suitable nidus, as well as other favorable conditions.

The microscopes on the tables show the bacilli all stained red.

CASE OF CHRONIC LEAD POISONING.

By W. M. SCOTT, M.D., Gladstone, Man.

S. T. W., aged 35 years, hotel-keeper, a robust, muscular man, sent for me on the evening of Friday, the 19th of October. His condition, on my arrival, was as follows: Temperature 100½°; pulse 80, and regular; perspiring freely; countenance anxious, restless; vomiting occasionally; abdomen distended and tympanitic; acute pain in hypogastric region; anorexia; tongue coated with a white fur; bowels constipated; urine scanty and very high-colored; considerable headache. His past history is good, but for the past few years he has drank pretty heavily, though irregularly. He had been feeling poorly for some time past, his appetite being variable and capricious. He dated his illness from a week before, when he ate a hearty meal of greens, and he declared that the greens still remained in his stomach like a log, notwithstanding that he had vomited several times, and had eaten very little since. The day previous to my seeing him he took a fancy for canned plums, and devoured about half a can. During last week, bowels were constipated and urine very scanty and dark. On examination, I found the abdomen as before stated, but no special pain in left iliac region, and no gurgling. The pain had been in this region the day previous,

but had moved to above the umbilicus, and I noticed that it was not markedly increased by pressure. The liver was of normal dimensions. Lungs and heart normal, but breathing was rapid and shallow. I took it to be a case of acute gastric catarrh. Ordered an enema, hot fomentation to abdomen, and calomel and opium internally. On Saturday he was much the same, but that the temperature was normal, and the pain increased in intensity, causing him to writhe in bed, and it was confined to the umbilical region. I immediately looked at the gums, and discovered the *blue line* beautifully developed. This changed the appearance of things at once, and though the vomiting of bile-stained fluid still continued, I knew I had a case of colica pictonum to deal with. The pain was not in the least relieved by the hot fomentations, so I gave him, hypodermically, Morphiæ Sulph. gr. $\frac{1}{4}$, Atropiæ Sulph. gr. 1-150, which quieted the pain in a few moments. And just here let me say, that I have found it a good plan, in giving a hypodermic, to oil the needle, for which purpose a small vial can be carried in the case along with your tablets. It very greatly diminishes the pain of the operation. I never saw this done in hospital, nor is it, so far as I am aware, to be found in a text-book. My instinct led me to try it, and though simple, it is worth knowing. The patient was ordered Pot. Iodid. grs. v. t.i.d., and sulphuric acid lemonade. I had to repeat the hypodermics morning and evening for three days, but for the past two days he has required it only once, as he is improving very rapidly. I find that the man's wife and sister-in-law are suffering from the same cause, but in a mild form. The blue line on the gums is developed to a slight extent, with indigestion and a brassy taste in the mouth. I forgot to mention that my patient has not remarked a metallic taste, though he does complain of the taste being disagreeable. Now as to the source of the lead. I examined the well and pump, but found nothing there. I need scarcely have looked there, for water, for a considerable time past, has been too thin for him. I found that he had been in the habit of taking, the first thing in the morning, what is commonly called a "stone fence"—that is, whiskey and cider, the latter of which was of the manufactured

variety, was kept in the cellar, and was connected with a pump in the bar by means of a lead pipe, of which there was about 16 feet. I analyzed the cider, and got strong indications of lead.

QUARTERLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By WILLIAM GARDNER, M.D.,
Professor of Gynæcology, McGill University; Gynæcologist to the Montreal General Hospital.

The Treatment of Pelvic Abscess in Women by Incision and Drainage.—At a recent meeting of the New York County Medical Society, Dr. P. F. Mundé of New York city read a paper on this important subject. Inflammations of the pelvic peritoneum and cellular tissue constitute, according to some authors, the most common but one, of the diseases peculiar to women, the exception being cervical endometritis. There can be no doubt that this statement, if not absolutely true, is very nearly so. A small proportion only, however, end in suppuration. This may, however, be more common than is generally laid down in text-books. A moderate quantity of pus may easily be passed unnoticed from the rectum, bladder, or vagina. In the majority of such cases the abscess closes spontaneously. In not a few, however, a chronic discharging sinus persists for months or years, and may kill the patient. Hence the importance of Dr. Mundé's subject, in his treatment of which he, however, did not lay claim to anything new. He believes that abscess far more often follows cellulitis than peritonitis. Certain of those who took part in the discussion did not agree with him. Dr. Mundé gave the histories of ten cases, and at the close of his paper formulated the following conclusions:—

1. Pelvic abscess in the female is not very common, in proportion to the great frequency of pelvic exudation, and probably does not occur in more than ten per cent. of all cases, the majority of exudations terminating in spontaneous absorption.

2. Pelvic abscess may be either extra-peritoneal, the result of cellulitis (by far the most common variety), or intra-peritoneal, the consequence of pelvic peritonitis. If intra-peritoneal, the

adhesive inflammation between pelvic viscera and intestines may so seal the abscess-cavity as to render it *practically extra*-peritoneal. Abscess of the ovary and pyo-salpinx do not belong to the category of "pelvic abscess" proper, and do not fall under the same therapeutic rules, unless when, by agglutination to the abdominal wall or to Douglas' pouch, they become virtually extra-peritoneal.

3. Small, deep-seated pelvic abscess, not exceeding a capacity of two ounces, and minute multiple abscesses in the cellular tissue, can often be permanently cured by evacuating the pus thoroughly with the aspirator. The surrounding exudation is then rapidly absorbed.

4. About one-half of the abscesses open spontaneously into the vagina, rectum, bladder, or through the abdominall wall and ischiatic fossa. These cases may gradually recover without treatment, or the sinuses may persist until closed by surgical interference.

5. Abscesses containing more than two ounces of pus should be opened by free incision along an exploring needle or grooved director, cleared of debris by finger or blunt curette, and drained and irrigated, if necessary, through a drainage-tube.

6. This incision should be made where the pus points most distinctly, which is usually the vaginal vault.

7. In a certain number of cases the pus points through the abdominal wall, generally in the iliac fossa, and the incision should then be ample and free drainage secured.

8. When the pus has burrowed deep into the pelvic cavity, and a probe can be passed from the abdominal incision down to the vaginal roof, mere abdomino-cutaneous drainage will not suffice, and a counter-opening must be made in the vagina, and a drainage-tube carried through from the abdominal wound into the vagina. This drainage-tube may have to be worn for months. In making this incision, care should be taken not to wound the bladder.

9. The opening of a pelvic abscess which points through the abdominal wall, does not differ from, and is no more dangerous than, the same operation elsewhere on the cutaneous surface of

the body. It is not an "abdominal section" or a "laparotomy" in the sense that those terms are used to indicate the surgical opening of the peritoneal cavity.

10. Chronic pelvic abscesses, which have burst spontaneously and have discharged through the vagina, rectum, or elsewhere for months or years, are exceedingly difficult to cure. This is particularly the case when the opening is high up in the rectum. A counter-opening in the vagina, or enlarging the opening if there situated, the curette, stimulant irrigation, etc., may occasionally succeed, but usually fail.

11. A perityphilitic abscess may point through the abdominal wall, and simulate a pelvic abscess proper. Aspiration will settle the diagnosis; the treatment is the same.

12. The majority of cases of pelvic abscess recover, at least the mortality is small.—(*N. Y. Med. Record.*)

Shortening of the Round Ligaments for certain Uterine Displacements.—Dr. Alexander of Liverpool read a paper on the operation now known by his name at the meeting, on June 10th, of the British Gynæcological Society. Dr. Alexander has operated in 80 cases, and reaffirms his great confidence in the value of the operation. He gives minute instructions in the method of performing the operation. These ought to be carefully read by every one who contemplates performing it.

After discussing the anatomical and physiological basis of the operation, the author comes to the results, and this part of the subject he discusses—1st, With reference to the mortality of the operation; 2nd, With reference to the beneficial results that accrue by its performance to those who survive. As to the first consideration, the mortality, Dr. Alexander said this may be set down as *nil*. Some deaths have occurred, but these he claimed were all from preventible causes. He knew of three. One of these occurred in his own practice. The operation is therefore not to be trifled with. The most important point, then, is the second—the beneficial results. These the author considers under two heads: 1st, Its permanent utility in correcting uterine displacements; and 2nd, Its effects in relieving the patient's symptoms. In his own practice, Dr. Alexander has

never seen a relapse of any backward displacement corrected by the operation. In prolapse, the results in this direction, although good, are not quite so favorable for the relief of the patient's symptoms. It has been valuable for the relief of these so far as they depend on displacements, and not on complications or associated conditions. Obviously great care in making a complete diagnosis will be necessary in order to avoid disappointment. The author concludes by saying: "It may be performed in any case of prolapse and backward displacement in which the surgeon and patient may wish it to be performed, except those incurable, miserable cases where bed and bandages are the only available remedies. By a more timely adoption of the operation, such extreme cases would never occur. To secure success, the operation must be properly performed, and the after treatment must be very rational, so that no strain be placed on the ligaments until sound union has taken place."—(*British Gyn. Journal.*)

Parametritis Posterior.—At the last meeting of the Association of German Physicians and Naturalists, held at Strasburg, Nieberding of Würzburg read a paper on this subject in the gynæcological section. The great frequency of certain forms of pelvic cellulitis and peritonitis is tolerably well appreciated, but every consultant must know how often general practitioners fail to appreciate the great frequency and pathological importance of the disease now under consideration. Velpeau, Sommer, E. Martin and others have alluded to the subject, but to Schultze of Jena must the greatest credit be given for its elucidation. It consists in an inflammation of the peritoneum of the Douglas's pouch and the utero-sacral ligaments which bound it, structures which contain cellular tissue and muscular fibre. Exudation occurs, and as this is absorbed, very frequently a shortening of the ligaments, with consequent dragging backwards of the uterus, anteflexion of the uterus, retroversion, traction on the urethra, and, as a consequence, frequent and perhaps painful micturition. Nieberding expresses surprise that so little attention has been given to this condition, and explains it by the growing interest which all surgical procedures excite in gynæcologists in these

days. This leads to a neglect of many departments of gynæcology. He has found the condition to be present in 10 per cent. of his patients. He quite agrees with Schultze as to the genesis of the affection. It arises frequently in the puerperium, but more frequently under other circumstances. It is often unaccompanied by any acute general or well-defined local symptoms, or if these occur, they have been of short duration. The whole course is insidious and chronic. The symptoms in the chronic stage are pelvic and sacral pain, of a wearing, aching character, increased by exertion, occasional acute pelvic pains, pain in defecation, dysmenorrhœa and other menstrual troubles, bladder symptoms, constipation, with more or less profound impairment of digestion and nutrition, and numerous reflex symptoms, headache of the vertex and other neuroses, and neuralgia. The causes in the lying-in woman are septic, the absorption being through lacerations and abrasions of the genital tract. In the unmarried, young girls and others, it is due to septic infection of fissures of the rectum from hardened fæces, and by extension of endometritis, specific or other.

The diagnosis is to be made by a careful bimanual examination, the patient being in the dorsal position, when the uterus will usually be found anteflexed or anteverted, the cervix drawn up and backwards, while through the posterior *cul-de-sac* masses of exudation, or tense, more or less sensitive bands will be felt stretching from the posterior uterine wall in the direction of the sacrum. Nieberding does not allude to the treatment, which, indeed, is often unsatisfactory. It is that of chronic pelvic inflammations generally, and that best suited to the impaired general health.—(*Cent. für Gyn.*, No. 41, 1885.)

Intra-uterine Treatment of Chronic Uterine Catarrh.—At the same meeting, Kugelmann of Hanover related his experience with iodoform, which he was induced to try by its good effects on a nasal and laryngeal catarrh in his own person. His method of application of the drug is by insufflation with a metallic catheter, with lateral openings near its beak, by which the powder is taken up, and being inserted within the uterus, it is expelled by compressing an elastic ball at the other end. The

applications are made twice a week. The method is painless and free from danger, and has been very successful in the author's hands. Previous dilatation by laminaria or other tents, or by metallic dilators, may be necessary.—(*Cent. f. Gyn.*, 41, '85.)

Uncontrollable Vomiting of Pregnancy cured by Feeding through an Œsophagus Tube.—Brünniche of Copenhagen reports a case. An unmarried woman of 33 suffered from obstinate vomiting and cardialgia. She was reduced to extreme weakness, almost collapse, the gums were bleeding, and the general appearance cadaverous. The diagnosis was gastric ulcer. A tube was passed into the œsophagus, but only a short distance down the gullet to avoid injury to the supposed ulcer of the stomach. Milk, broths, hare soup, and other soups were thus introduced within the stomach. Nausea and vomiting ceased forthwith. The woman soon learned to use the tube herself. After three weeks she was able to dispense with it. Pregnancy was now discovered. The case is of interest with reference to the sensitive point whence the irritation which excited the vomiting appeared to start, viz., the upper part of the œsophagus. The bearing of the case on other forms of obstinate vomiting is obvious. This is not due alone to morbid conditions of the stomach.—(*Cent. f. Gyn.*, 41, '85.)

Electricity as a Therapeutic Agent in Gynœcology.—This is the title of a long paper contributed by Dr. P. F. Mundé to the *American Journal of Obstetrics* for December, '85. The author first alludes to the uses of the faradic current in obstetrics, and especially in the treatment of that most formidable condition, extra-uterine pregnancy, and then proceeds to say that his object in writing the paper is mainly to show that no special talent or prolonged study of electricity, nor the possession of expensive apparatus, is necessary " to employ the electric current in gynæcology, and in many cases with considerable benefit."

The following resumé of the most important practical points given by Dr. Mundé will be of interest:—

1. Galvanic current the most useful, inasmuch as, soothing, anæsthetic and alterative effects are oftenest indicated.

2. A mild, steady, painless current always to be used.

3. When a constant current causes pain, or increases existing pain, it is doing harm, and must be reduced in strength or stopped.

4. Always begin with a weak current, and, if necessary, increase its strength.

8. In order to give permanent relief, or do appreciable good, the treatment must be employed for a long time—at least twice a week, but better three times a week, or daily. In many cases the treatment must be continued over a period of from three to six months.

9. Pain may be relieved or completely removed, but a permanent cure, complete absorption of exudation, a restoration of the organ to health in hyperplasia, chronic oöphoritis, cellulitis and peritonitis, is seldom achieved. This, however, applies with equal force to other remedies.

Dr. Mundé gives the following list of conditions in which electricity has been proved to be beneficial: deficient development of uterus and ovaries; amenorrhœa; dysmenorrhœa, obstructive and neuralgic; superinvolution; subinvolution (with or without menorrhagia); hyperplasia uteri; chronic ovaritis and salpingitis; chronic cellulitis and peritonitis, and lymphangitis; pelvic neuralgia, local and reflex; uterine displacements; erosions of cervix; uterine fibroids; ovarian tumors.

The conditions in which the two varieties of the electrical current act most beneficially may be summarized as follows:—

FARADISM.	GALVANISM.
Deficient development of uterus and ovaries.	Hyperplasia uteri.
Amenorrhœa.	Chronic ovaritis and pachysalpingitis.
Subinvolution and menorrhagia.	Chronic cellulitis and peritonitis, and lymphadenitis.
Superinvolution.	Pelvic neuralgia, local and reflex.
Uterine displacements.	Dysmenorrhœa, neuralgic and obstructive.
Uterine fibroids (interstitial).	Erosions of cervix.
	Subinvolution.
	Uterine fibroids (sub-peritoneal.)

(*Amer. Jour. Obstet.*, Dec., 1885.)

Cocaine in Gynæcology.—This is the title of a short paper by Dr. C. H. Thomas of Philadelphia, appearing in the *Philadelphia Medical News* for Nov. 21, '85. After speaking of the well known effect of this drug in producing pallor and shrinkage, as well as anæsthesia of the tissues to which it is applied, the author remarks that the former effect is not so well known. It is also of longer duration than anæsthesia, and in some cases is permanent. Dr. Thomas generally uses a four per cent. solution, but in cases where considerable pain is anticipated he employs a ten per cent. solution. He has found it very useful in some cases of cervical endometritis, in which, without much erosion or discharge, there is great tenderness about the internal os uteri, cases in which a probe easily brings blood, and applications cause severe radiating and ovarian pain. Cocaine applied with the syringe or cotton carrier prevents pain and bleeding. In the treatment of urethral caruncle and other painful affections of the urethra, it is most valuable. In cases of vaginismus, before introducing instruments and before making applications, its value has also been proved. In a case of painful irritability, with spasm of the bladder, simulating cystitis, entirely unrelieved by the opium suppository and other measures, the author was enabled to afford complete and permanent relief by a single injection of one grain of cocaine thrown into the bladder.

A new Diagnostic symptom of Rupture in Extra-uterine Pregnancy.—Dr. J. J. E. Maher of New York city relates a case of extra-uterine pregnancy ending fatally, verified by autopsy, in which he observed a symptom which he believes will be of value in diagnosing such cases, and so aiding a decision of the sometimes difficult question of whether to operate or not. The symptom alluded to is remarkable abdominal heat, with a subnormal temperature in the axilla. The author remarks:—"It was observed that a diagnosis of abdominal hemorrhage had been presumed in my case. It was founded on the following evidences: The symptoms of shock, accompanied by great weakness; the sudden onset of severe pain in, and distension of, the abdomen, and that remarkable abdominal heat; both subjective and objective, presenting so striking a contrast to that of

the rest of the body. This symptomatic abdominal heat does not appear to have hitherto attracted any attention in the cases already recorded ; yet if it be remembered that there is beneath the abdominal wall a clot of warm blood varying in bulk from one to two quarts to as many gallons, it becomes an easy matter to appreciate the importance of this symptom in its bearing upon the diagnosis. Indeed, this symptom alone, *cæteris paribus*, would seem to be unequivocal in differentiating abdominal hemorrhage from purely nervous shock."—(*N. Y. Med. Record*, Jan. 2, 1886.)

Perineorraphy.—The operation for ruptured perineum has recently been discussed in the British Gynæcological Society and in the *British Medical Journal*. In the latter *Journal* for October 24th, 1885, Dr. Fancourt Barnes publishes a note on twenty-seven cases of perineorraphy. Sixteen of these were done by the old method—dissecting off an area of mucous membrane and bringing the freshened surfaces into symmetrical apposition. All were successful, but, as is usual in all such cases, morphia suppositories were necessary till the sutures could be removed. The last eleven cases were done after Mr. Lawson Tait's method, which Dr. Barnes had since learned. This operation is difficult to understand without illustrations. The best description of the operation is that in Dr. Arthur Edis' Manual of Diseases of Women. At least Mr. Tait himself gives Dr. Edis this credit. He (Tait) had previously described it in a paper read before the London Obstetrical Society in November, 1879. The method differs from others in that there is no removal of tissue, and therefore, if it fail, the patient is in as good a condition as ever for successful operation. The recto-vaginal septum is split with a pair of curved, sharp-pointed scissors in such a manner that the lower flaps are opposed and turned into the rectum, while the upper are turned upwards to the vagina and also opposed The stitches are inserted at the point of reflection of the two flaps, made by splitting the septum. They are not passed through skin at all. By this method it is claimed that no pain severe enough to require morphia is suffered. The bowels are kept open by daily enemata. The operation, Mr.

Tait claims, can be done, splitting the septum and putting in sutures, in from five to eight minutes.—(*Brit. Med. Journal.*)

Oöphorectomy for Bleeding Fibroids.—Dr. Goodell exhibited the ovaries and related the case from which they were removed at the Obstetrical Society of Philadelphia on November 5, '85. There was severe hemorrhage and multiple fibroids; six tumors could be made out. The womb measured 7.5 inches. The ovaries were removed without difficulty. They were enlarged by follicular degeneration, a condition which Dr. Goodell had repeatedly seen in cases of uterine fibroid. The effect of the operation on the tumors, especially the main one, was astonishing. After two weeks the uterus had diminished in length nearly a handbreadth. Forty seven days after the operation the uterine cavity measured only 3.25 inches, a diminution of 4.25 inches. Dr. Goodell remarked that every successful case in which he had removed the ovaries for fibroid tumor of the womb had been followed by menopause and rapid diminution in size of the tumor. But in his hands and in those of others the operation had been more fatal than that of ovariotomy. This is doubtless due to the occasional great difficulty of the operation. During the discussion, Dr. Montgomery stated that in his experience menopause did not always at once occur; in some of the cases not for two years after the operation.—(*Phila. Med. News.*)

In a clinical lecture on *Painful Menstruation and Sterility from Flexion*, Dr. Goodell of Philadelphia reiterates his previously expressed statements of the great value of rapid dilatation of the uterus. At the outset of his lecture Dr. Goodell points out the fallacy of conclusions arrived at by certain authorities with reference to the effects of certain deformities and displacements of the uterus. "But in the great majority of cases neither anteflexion nor, for the matter of that, anteversion, is pathological. In almost every unmarried or barren woman you will find the womb either bent forward or tilted forward, and resting on the bladder; for this, in varying degrees, is its natural position. The mistake made is in attributing to this natural position of the womb the various forms of pelvic trouble, especially that of irritability of the bladder, to which women are so

liable. But the kinship between the brain and the bladder is a remarkably close one. This has lately been studied by two Italian physiologists, Mosso and Pellacani, who go so far as to contend that ' every mental act in man is accompanied by a contraction of the bladder.' The irritability of the bladder is, then, one of the first symptoms of loss of nerve control. Everybody is liable to it. You, on examination day, will be annoyed by it. Many a lawyer, before pleading an important case, and many a clergyman, just before delivering a discourse, is compelled from sheer nervousness to empty the bladder. So it is with the lower animals, which, when frightened, micturate involuntarily. A nervous bladder is, then, one of the earliest phenomena of nervousness. Now, a hysterical girl, or a woman whose nervous system has collapsed under a strain of domestic cares, consults a physician for such symptoms of nerve prostration as wakefulness, utter weariness, a bearing down feeling, backache, and perhaps, above all, an irritable bladder. Upon making a digital examination, he, of course, finds the fundus of the womb resting on the bladder, and at once jumps to the conclusion that the whole trouble is due to the pressure of the womb on the bladder, viz., to the existing anteflexion or to the anteversion, as the case may be. He now makes local applications, and racks his brain to adapt or to devise some pessary capable of overcoming the supposed difficulty, forgetting that the upward, or shoring pressure of the pessary on the bladder, must be greater than the corresponding downward or gravity pressure of the womb. There is, in fact, no pessary but the dangerous stem-pessary, which can meet the end without pressing upon a fold or double thickness of the bladder. But, very fortunately, anteflexion is not often pathological. It is certainly not pathological in the foregoing instance ; for the symptoms, especially the vesical ones, are not due to the pressure of the womb upon the bladder, but to sheer nervousness, or nerve prostration, which is the thing to be treated, and not the womb. There are exceptions to this rule, but not many ; for instance, a womb, heavy from subinvolution or from the pressure of a fibroid, may make uncomfortable pressure on the bladder."

Dr. Goodell firmly believes that in many cases of uterine flexion there is obstruction to the escape of menstrual blood and other discharges, and explains the advent of dysmenorrhœa some time after a sterile marriage by a thickening of the endometrium, with narrowing of its calibre, the result of the congestions from sexual intercourse. But we also see the dysmenorrhœa of the unmarried increasing with age. "Nature intends that the periodical congestions of the womb should be interrupted by pregnancy and lactation (during which period menstrual congestion is arrested), and without these interruptions the mucous lining of the womb is liable to thicken, and by its thickness to narrow the canal." Dr. Goodell has performed thorough dilatation under ether nigh 350 times, with a large measure of success, in completely curing dysmenorrhœa or greatly relieving it.—(*Philadelphia Med. News*, Dec. 12, '85.)

Correspondence.

New York, Dec. 24th, 1885.

The medical profession is considerably agitated over the recent verdict of a case brought against two practising physicians. The facts of the case are briefly as follows:—In November, 1879, Drs. A. E. M. Purdy and A. S. Purdy diagnosticated smallpox in a patient named Miss Angelina Brown. The former saw her later in the day with Sanitary Inspector Dr. C. E. Lockwood, who also diagnosed smallpox. The patient was sent to the smallpox hospital. On her arrival, the house physician, Dr. Bowen, confirmed the diagnosis, and reported to the Board of Health accordingly. He subsequently reversed his diagnosis, and certified that Miss B. was suffering only from eczema, and told her she need not remain in the hospital. She voluntarily remained there, however, for some days. After leaving the hospital she brought suit against Drs. Purdy, claiming damages to the extent of $10,000. The case was tried last November, in the Superior Court, before Judge Ingraham. The counsel for the defence moved to dismiss the complaint, on the ground that the Board of Health was responsible for sending Miss B.

to the smallpox hospital. His Honor denied the motion, and ordered that the trial proceed before the jury. Drs. A. Flint, Keyes and George H. Fox testified that, from the recital of the symptoms and character of the eruption, as detailed by witnesses, Miss B. was undoubtedly suffering from smallpox at the time referred to. The jury brought in a verdict of $500 against the defendants. It is not the correctness of the diagnosis or otherwise that makes the case so important to the profession of this State. A physician is legally bound to report every suspected case of smallpox, or other infectious disease, to the sanitary officer. In accordance with the decision of Judge Ingraham in sending the case before the jury, the physician becomes liable for any damage arising or claimed to have arisen through the subsequent acts of the Board of Health. The Medical Society of the County of New York have taken the matter in hand. A committee has been appointed, and if sufficient funds can be collected, an appeal will be made to a higher court. To this fund Dr. A. E. M. Purdy has subscribed $1,000, Dr. Agnew $500, and other subscriptions of $100 and under have been received.

At the last regular stated meeting of the Academy of Medicine, Dr. T. G. Thomas read an important and exhaustive paper on "Vulvar and Vaginal Enterocele." He drew attention to the slight treatment the subject had received in systemaatic works on gynæcology. His own book shares the general criticism, which brought a smile to the countenance of many of his hearers. He particularly emphasized the importance of making a correct diagnosis, which, he said, was enough, if one always exercised due care and kept in mind the probability of the occurrence of this form of hernia. A case that occurred in his own practice forcibly illustrated the danger that might follow an error in diagnosis. "A patient called upon me with the following history: She had had an abscess just below the external ring, which, after poulticing, had been evacuated by her physician about a month before the time of her visit to me. After this she had felt well until a week before, when, after a muscular effort, the pain had returned with all the original signs of abscess, and these had continued, although she had painted the part

steadily with tincture of iodine, as she had been directed to do in case of such an occurrence. Being in great haste at the moment, I examined the enlargement while the patient was standing, and under a recent cicatrix, which was painted with iodine, I discovered what I supposed to be a re-accumulation of pus. As the patient came to me in absence of her physician, merely for the evacuation of this, I placed her in the recumbent posture, and, lancet in hand, proceeded to operate ; but, to my surprise, I discovered that change of posture diminished the size of the enlargement. This excited my suspicion, and upon further examination, I found that a recent hernia had occurred under the old cicatrix."

The paper embodied the report of a remarkable case of extreme vaginal hernia. About six years before, the patient noticed a small lump at the vulva. This kept steadily increasing in size until it had come down to the middle of the thighs, on the right side. The patient's life was miserable. She could neither stand, walk nor sit with any comfort. She was willing to undergo any operation that gave promise of the least relief. Dr. Thomas proposed " to perform laparotomy, with an assistant to keep the hernial sac well within the pelvis by one hand in the vagina, seize the tumor at its most dependent portion, drag it up into the abdominal wound and fasten it there by suture, sustaining the heavy sac, meanwhile, by two knitting needles passed through and lying flat across the abdomen." In performing the operation as above sketched, he found in the pelvis a soft, fibrous tumor, which evidently had been pushed up from below, on a level with the symphysis pubis. He removed this by splitting the peritoneal covering, tying a number of bleeding vessels, draining the sac with a glass tube, and fastening the sac into the abdominal wound. The patient made a good recovery, and so far, a month after the operation, there has been no return of the hernia. Dr. Thomas confesses, however, that he feels apprehension about the future.

New York, January 21, 1886.

An event of considerable importance took place yesterday within the walls of the Academy of Medicine in this city. Some months ago Dr. James B. Hunter conceived the idea of forming

an association of those who had served on the resident staff of the Woman's Hospital of New York, to meet twice yearly for the purpose of interchanging ideas and spending a few social hours together. The happy conception bore good fruit, and yesterday witnessed the first semi-annual meeting of the Alumni Association of the Woman's Hospital. Judging from the number of valuable papers read and the good attendance, the meeting was a great success. The benefits derived from such an organization will not be limited to its members, but will be shared by the general profession. The Alumni now number 56, and each year adds four to the number. These men are naturally scattered all over the Union. This influence upon the practice of gynæcology in this country cannot be but great. It will be interesting, as the chairman (Dr. Hunter) said in his address, to note how far the various men have diverged from the original teaching in the hospital. The address of the chairman contained some interesting facts, one of which was that the first alumnus was none other than the honored and renowned present senior surgeon, Dr. T. A. Emmet. This incidence, which had not generally been known before, was received with a spontaneous burst of applause. There is a laughable circumstance connected with this first appointment. At that time it was a law, recorded in the by-laws of the hospital, that the surgeon's assistant or nurse must be of the female sex. In the following year, however, the young assistant asserted the right of his sex. The above by-law was now changed to read: The surgeon's assistant shall be such an assistant as the exigencies may require. The exigencies required that he should be a man.

Dr. Emmet's first connection with the hospital dates back to 1857, and from this date until the present he has been uninterruptedly identified with the various vicissitudes of the institution. The success of the hospital owes more to him than to any other one man, living or dead. There was a time when its fortunes were beset with heavy black clouds, when its chief surgeon resigned, when the general profession would take no interest in it, and when it seemed as if a special hospital for gynæcology in the city of New York would be a failure. But Dr. Emmet remained

faithfully at his post. By continued perseverance, by getting the leading members of the profession interested in its welfare, by that continued devotion to its interests (even at his own personal loss) which has characterized him since his first connection with the hospital, Dr. Emmet succeeded in extracting the hospital from the mire into which it had fallen and raising it to its present importance and celebrity.

It was a fit event that the first alumnus should entertain the Alumni Association at its first semi-annual meeting. The members of the Obstetrical Society were also invited, and a most pleasant, enjoyable evening was experienced. The hum of voices was continuous, the wine flowed freely, the fumes of tobacco curled gracefully from several mouths, and the "lacerated perineums and cervices" could be overheard here and there in the conversation; the general tone was one of pure and simple enjoyment, without any admixture of professional jargon.

Another striking proof of the difficulties attending the diagnosis of pelvic tumors was afforded by a case in which Dr. Mundé operated a few days ago at Mount Sinai Hospital. The patient had been suffering from symptoms referable to the pelvic organs for some time past, and about four months prior to her admission into the hospital a tumor was detected in the right side of the pelvis. This tumor, immediately before the operation, was diagnosticated by Dr. Thomas as a sarcoma. Dr. Mundé did not commit himself as to the nature of the tumor, but felt certain it was a solid growth of some kind. At the operation it was found to be a cyst, about the size of an infant's head, filled with the products of a suppurating dermoid. The operator removed the cyst, cauterized the pedicle with a pacquelin, allowed it to remain intra-peritoneal, and introduced a drainage-tube in the lower angle of the abdominal wound. I learn the patient is progressing favorably towards convalescence. If a mere tyro may be allowed to express an opinion upon so weighty a matter, it would be this: that in diagnosticating pelvic tumors too much value is attached to physical signs and not enough attention is bestowed upon the patient's antecedents and history. *Appropos* of this, Jonathan Hutchinson has recently made some apposite

remarks (*vide American Journal of Medical Sciences*, Jan. '86). "Growths," says he, "have a clinical history which, often, is more characteristic than what the microscope can tell us." In the case of pelvic growths, we may substitute "the sense of feel in our finger's ends" for the microscope.

Through the kind courtesy of Dr. Mundé I was enabled to witness the above operation, as well as another of considerable interest since. It was an Alexander's operation for the shortening of the round ligaments in an intractable case of retroflexion. The operator experienced considerable difficulty in reaching the ligaments, which, instead of taking the usual oblique course, passed almost vertically downwards into the pelvis. Dr. Mundé, in drawing attention to this fact, remarked that writers on the subject had failed to mention the occasional occurrence of such a condition.

That the profession—here, at least—has lost none of its interest in gynæcological matters was evidenced by the large attendance at the meeting of the Medical Society of the County of New York on 28th December last, when Dr. Mundé read a paper on the treatment of pelvic abscess in women by incision and drainage. He said that in the majority of cases of pelvic exudation following cellulitis and peritonitis, the exudate became absorbed and the patients recovered without the formation of abscess. Sometimes the process of absorption might be very long, extending over months. In some cases the exudate broke down and formed an abscess, an occurrence most likely to take place when the exudate was large and formed rapidly, and when the patient's recuperative powers were below par. Cellulitis was the common factor of abscess, peritonitis only occasionally. Of 400 cases of pelvic cellulitis and peritonitis of which he had records, only 48 terminated in abscess. This percentage was thought larger than usual, because many of the cases (21) were seen in consultation, 23 of the cases opened spontaneously, 8 were treated by free incision and drainage, 6 through the abdominal wall, and 2 through the vagina. All of the cases operated upon recovered. In a suspicious case, he always verified his suspicions by the introduction of an aspirating needle.

When the amount of pus did not exceed two ounces, he was in the habit of treating it by simple aspiration. If a number of small abscesses were suspected, the aspiration was repeated until all were supposed to be evacuated. When the amount of pus exceeded the above stated amount, free incision was the better method. When the abscess opens spontaneously through the rectum, the opening is usually too high up to reach and divide. This, even if feasible, is not always advisable, as the contact of the fæces would interfere with healing. Brief reference was made to some of the unusual forms of pelvic abscess. The pus might find its way down to the perineum, or the point of fluctuation might be found at the crest of the ilium on one side. If fluctuation appeared near the crest of the ilium, the aspirator should be introduced, and, if pus was found, the grooved director should be introduced and an incision made with a blunt-pointed bistoury. The reader of the paper condemned the operation of laparotomy for true pelvic abscesses; it was unnecessary, and and exposed the patient to too great a risk.

In the discussion that followed, some sharp-shooting was indulged in, which enlivened the proceedings of the meeting.

Dr. Polk took issue with Dr. Mundé on several points. He thought the percentage of mortality was much greater than the reader of the paper had stated. Laparotomy, he thought, was the best treatment for many of these cases. We never can tell in a given case if it is a uni- or multilocular cyst, and in the latter, laparotomy was the safer and quicker method of treatment. Moreover, it was difficult to diagnosticate these cases from pyo-salpinx, and if the latter condition was found to exist, the treatment (laparotomy) adopted would be proper.

Dr. Lusk thought that such a paper embodying so many practical points was much needed, as the general profession was still hazy on that subject. He had been recently told by a country practitioner that all such cases in the country die!! He agreed in the main with the reader of the paper.

Dr. W. Gil Wylie disagreed with the author as to the pathology of these cases. He thought the majority of them started in connection with the Fallopian tubes, the ovaries, and broad

ligaments. He would be in favor of performing laparotomy in all cases that did not point in a favorable condition.

Touching congress matters in Philadelphia, an interesting vote was taken a few weeks ago which indicates clearly the feeling of the profession in that city. At a meeting of the County Medical Society for the election of delegates to the State Society, and to the American Medical Association there were two tickets, one representing the Shoemaker faction and in favor of the action of the Association, and the other, headed by Dr. D. Hayes Agnew, opposed to it. The latter carried the day by a vote of 167 to 36. H.N.V.

Reviews and Notices of Books.

A System of Obstetric Medicine and Surgery, theoretical and clinical, for the Student and Practitioner.—By ROBT. BARNES, M.D., Obstetric Physician to St. George's Hospital, &c., and FANCOURT BARNES, M.D., Physician to the Royal Maternity Charity and to the British Lying-in Hospital. Illustrated with 231 woodcuts. Philadelphia: Lea Brothers & Co.

A modern work on obstetrics has an immense field to cover. No branch of medicine has made more advances than this, and there is none in which it is of the greatest moment for every general practitioner to find himself thoroughly *au fait*. The additions to our knowledge of the causes of suppuration and of septic processes in wounds have been very remarkable, dating from "Listerism," and now used in the various forms of so-called "antiseptic" surgery. The same principles have been invoked in the case of the puerperal woman, especially in lying-in hospitals, and the success obtained, as shown by greatly reduced mortality, has been very striking. Dr. Fancourt Barnes has been one of the strongest advocates of "antiseptic midwifery," and has done much to show the superior advantages of some form of antisepsis under these circumstances. This point is merely mentioned as one of the most prominent at the present day, which is necessarily to be found fully discussed only in the most

recent writings. Many others might similarly be added to this. Dr. Robert Barnes has long been one of the leading English obstetricians, and his work and special writings (especially upon the obstetric operations) are well known in this country. It is, therefore, with pleasure that we draw attention to the appearance of his systematic treatise upon the whole subject. Some of the earlier chapters upon Embryology have been contributed by Prof. Milnes Marshall. It is a very handsome book, profusely illustrated, and will be found invaluable for the advanced student and for purposes of reference.

Acne: its Etiology, Pathology and Treatment. A practical treatise based on the study of 1500 cases of Sebaceous Disease.—By L. Duncan Bulkley, A.M., M.D. New York and London: G. P. Putnam's Sons.

This is a treatise on a very common affection of the skin, which is a source of trouble and anxiety to young people of both sexes. Like the work on Eczema by the same author, it is based on the clinical study of a number of cases, and the whole work is arranged in much the same way. The anatomy and physiology of the sebaceous glands are first dealt with, and then a chapter is devoted to nosology and varieties of acne. There is also a chapter of statistics and one on the etiology of the disease. It is not till the fifth chapter is reached that the author really warms to his work, and describes the different forms of acne and their treatment. These chapters (V and VI) are valuable, and really tell us something about the various forms of acne. The author evidently regards acne as an affection which is significant of a deteriorated state of health. In this we cannot agree with him, as the most healthy young people are often afflicted with acne, and, in fact, few persons pass through the period of adolescence without having had some form of acne; on the other hand, the most debilitated not unfrequently have the clearest complexions. Minute directions are given as to diet and hygiene, and these will greatly please "acne hypochondriacs," who delight in centreing their thoughts on their own persons and in magnifying their ailment. The common forms

of acne are peculiar to adolescence, and as Hebra remarks, "*tempus varos curat.*" It is the privilege of the well-to-do to enjoy treatment by alteratives, dieting and local applications, which, at the most, can be of only temporary benefit. The poor arrive at the same result by allowing time to cure the disease. We confess we cannot see any reason to magnify such a disease as acne by devoting a book of nearly 300 pages to its pathology and treatment. Life is too short and books too many for any ordinary individual to be able to read a large work on such a comparatively unimportant disease as acne, when a much more concise and useful account can be obtained from any good text-book on skin diseases. To show how it is necessary to pad works of this kind, we might mention that no less than eighteen pages are devoted to Bibliography, nine to a "Synopsis of the Classification of Sebaceous Diseases by writers on General Medicine and Dermatology," and five to the "Names applied to sebaceous diseases in the literature of dermatology, with equivalents and synonyms." The work is well illustrated and the typography excellent. The book itself tells us all that is known about acne and its treatment, and is, in parts, a valuable contribution to the literature of the subject of which it treats, notwithstanding its prolixity.

Epitome of Diseases of the Skin.—By L. A. Duhring, M.D. Philadelphia: J. B. Lippincott & Co.

This little book is composed of sixteen lectures delivered by the author before the graduating class of the University of Pennsylvania. It is not intended that it should take the place of the larger text-books on diseases of the skin, but is meant to be an aid to students. It is a handy little book, can be easily put in the coat-pocket, and will be very useful to students attending skin dispensaries and the out-door departments of hospitals. It is supplied with a good index. The various skin diseases are shortly and clearly described, and in describing the treatment, formulæ are given. It is a capital little *vade mecum* for students, and very cheap.

The Management of Labor and of the Lying-in Period. A Guide for the young Practitioner.— By Henry G. Landis, A.M., M.D., Professor of Obstetrics and Diseases of Women in Starling Medical College; Fellow of the American Academy of Medicine; Member of the American Medical Association, &c. Philadelphia: Lea Brothers & Co.

Dr. Landis is already well known as the author of "How to Use the Forceps" and of "A Compend of Obstetrics." In the first of these works he very clearly expresses his views on the mechanism of the descent of the head through the pelvis, and makes a strong plea for the Davis forceps, which he maintains will fulfill all the legitimate uses for which obstetric forceps have been designed. In the present work, which is intended to serve as a guide to practice, the author sets forth briefly and with clearness his views as to the proper management of labor and the puerperal period. He first treats of the management of simple labor, and then considers the treatment of irregular or abnormal labors. The part of the book calling for particular remark is that which pertains to the use of the forceps. The author still cleaves to the Davis forceps, insisting, as he did before, that the blades shall be applied to the sides of the child's head. From some experience in the use of this instrument, we concur in this essential requisite. For this reason we also think that for the young practitioner not expert in digital examination this instrument is not the best or safest. Its use necessitates accurate diagnosis of the position of the head, and without a clear knowledge of the position, we think that the Davis forceps is neither easy to introduce nor safe to use. The advantages of the instrument are its great head curve, which prevents slipping when properly applied, and also the width of the blades, which enable them to fit closely to the head. The great head curve and broad blades make them, however, more difficult of introduction, which is a serious bar to their safe use by a tyro. The objections to the use of the Davis forceps do not apply at the outlet, where the head has rotated, so that if the blades are applied on opposite sides of the pelvis they will fit on the sides

of the child's head, but they do apply when the arrest of the head is at the inlet, where it is situated obliquely, and where, if they are properly applied by skilful hands, this instrument gives excellent results.

The physician engaged in active obstetric practice will find the pages of this little book, which are devoted to the application of the forceps and the mode of making traction, well repay perusal. The method of making traction is peculiar, and consists of a combination of two forces, namely, a direct traction *on the handles* with one hand and a pressing downwards and backwards in the axis of the inlet with the other hand *in front of the lock*. In this way we get "axis-traction," the great advantage of the Tarnier forceps. The old leverage or swaying from side to side movement of the forceps is very properly condemned. As the author states, "The practice is one of great antiquity; it was begun in ignorance of the true mechanism of delivery, and it is continued only by those who are wilfully blind to its nature." The chapter on Cæsarean section, Porro's modification of this operation, and gastro-elytrotomy, as recommended by Thomas, is short and to the point. Altogether, this modest little book is well worthy of careful study, and can be recommended, especially to the young practitioner, as a good general guide in the management of this very important branch of his profession.

Practical Suggestions respecting the Varieties of Electric Currents and the Uses of Electricity in Medicine. With Hints relating to the Selection and Care of Electrical Apparatus.—By A. L. Ranney, M.D., Professor of the Anatomy and Physiology of the Nervous System in the New York Post-Graduate Medical School. New York: D. Appleton & Co.

This will be found to be a convenient and trustworthy work on the practical application of electricity in medicine. The author tells us it is the first instalment of a complete work on the nervous system. It will be found very useful to those practitioners who desire to have a scientific groundwork for the use of electricity. It differs in this respect from previous American works

on electricity in medicine. Were it not for the unexampled greed for money of the manufacturers of electrical apparatus on this continent, the use of the different batteries would be much more common than they are. The prices charged for both faradic and galvanic batteries is practically prohibitory to the majority of general practitioners. There is little use for good works on the use of electricity when it is not possible to conveniently obtain reliable batteries at moderate rates.

A Practical Treatise on the Diseases of Children.—By A. Vogel, M.D., Professor of Clinical Medicine in the University of Dorfal, Russia. Translated by H. Raphael, M.D. Third American from eighth German edition; revised and enlarged. New York: D. Appleton & Co.

A work that has been before the public for twenty years, that has been translated into all the principal languages, and of which the translations have run through many editions, requires no further commendation from us. It appears to us to owe this unusual success to its terse, clear and accurate symptomatology. Many of the pictures of disease in children are the clearest we have read. In general, the pathology has been revised, and in most subjects corresponds with recent German thought. The therapeutics are eminently judicious, but the prescriptions are very German—*e.g.*, root juniperi. Of many drugs of recent date no reference is made. Still, we speak of it as an old friend when we say we can cordially recommend it, especially to those who do not confine themselves to only one treatise on this subject. The translation is an eminently readable one.

A Treatise on the Diseases of Infancy and Childhood.—By J. Lewis Smith, M.D., Clinical Professor of Diseases of Children in Bellevue Hospital Medical College, &c. Sixth edition; thoroughly revised. Philadelphia: Lea Brothers & Co.

With the beginning of the new year, the sixth edition of this now standard work is issued from the press. In the preface, the author states that a considerable part of the book may be

considered new. The articles on scarlet fever, cerebro-spinal fever, pseudo-membranous croup and infantile diarrhœa have been entirely rewritten. That on scarlet fever is a most exhaustive one, occupying nearly 70 pages, and is well worth careful reading. One recommendation in it we may mention here—the use of boric acid as a preventive and antidote to the scarlet fever poison, as well as in diphtheria. The substance of the additional matter in the other articles has appeared in recent contributions to the medical journals. Throughout the work, special attention in the revision has been given to the therapeutics. We know of no work we can recommend with so much confidence to both student and practitioner. Though many additions have been made to it, the book is still kept at its former size.

A Text-Book of Pharmacology, Therapeutics and Materia Medica.—By T. Lauder Brunton, M.D., D.Sc., F.R.S., Fellow of the Royal College of Physicians; Assistant Physician and Lecturer on Materia Medica at St. Bartholomew's Hospital; Examiner in Materia Medica in the University of London, &c. Adapted to the United States Pharmacopœia by F. H. Williams, M.D., Boston, Mass. Philadelphia: Henry C. Lea's Sons & Co.

The author of this work has been known for a number of years as one of the most active and painstaking laborers in the field of modern pharmacology. When the announcement was made that a work on this subject from his pen was to appear, there was a natural expectation that it would be one of a high order, and we feel confident in stating that these expectations are more than realized. The work is one which will take the first rank as a text-book for students and as a work of reference for practitioners. It is divided into two parts—the first dealing with general pharmacological subjects, while the second is devoted to materia medica and to general pharmacy, together with a description of the actions and uses of individual drugs. This part resembles the majority of text-books on materia medica in its scope and mode of arrangement. The first part is of great value,

as it is the first complete and systematic attempt in an ordinary text-book to explain fully the methods by which the action of drugs is determined, and the manner in which each function of the body is modified by medicinal agents. Another new feature in this work is the prefacing of the mode of action of drugs on the different functions, by an account of the physiology of the various organs. In the case of the heart and kidneys, this account is very full and elaborate. At times the author discusses also pathological questions. In this way the practical application of scientific pharmacology is made clear.

The author, in his preface, laments the amount of pharmaceutical and other unnecessary details required by the medical examining boards of the United Kingdom. It is a pity, we think, that he did not have the courage of his opinions and leave out of his work what he so much and very rightly objects to. Our medical boards in Canada are, unfortunately for our students, just as exacting in the matter of burdensome and useless knowledge of the materia medica as any of the English boards. Surely the day has arrived when examinations in scientific pharmacology and therapeutics should take the place of materia medica examinations. We feel confident that Dr. Brunton's work will do much to bring this desirable change about.

The work as issued from the Philadelphia publishers is much more convenient for reference and reading than the volume of the English publishers. The therapeutical index at the end of the volume will be found of service. There are also copious general and bibliographical indexes.

Manual of the Diseases of Women: Being a concise and systematic exposition of the Theory and Practice of Gynæcology. For use of Students and Practitioners.—By Chas. H. May, M.D., late House Physician, Mt. Sinai Hospital, New York, &c. Philadelphia: Lea Bros. & Co.

A small work, arranged with chapters upon all the more important diseases and disorders of the female pelvic organs, and with headings to make reference easy. It seems to have been carefully put together, and no doubt will be found useful for the purposes intended.

The Extra Pharmacopœia, with the additions introduced into the British Pharmacopœia of 1885.—By William Martindale, F.C.S., late Examiner of the Pharmaceutical Society, &c. Medical References and a Therapeutic Index of Diseases and Symptoms by W. Wynn Westcott, M.B., Lond., Deputy-Coroner for Central Middlesex. Fourth edition. London: H. K. Lewis.

The appearance of a fourth edition of this work since its publication two and a half years ago shows that it is well received. The present edition opens with an account of the changes in the recent edition of the British Pharmacopœia. The authors consider that it was unfortunate that no working medical practitioners or practical pharmacists had a voice in the production of the pharmacopœia. We consider this little work of much more value to the practitioner than the pharmacopœia. It contains a vast amount of important information on improved methods of administering drugs not obtainable elsewhere. It is a work we think that every practitioner should have. The therapeutical part of the volume has been brought up to date, at least as far as English literature is concerned. We would be glad to find references in future editions to foreign literature as well. All that is good in therapeutics does not appear in English medical literature. The therapeutical index would be greatly improved if it contained less empiricism and more science. The description of some recently-introduced agents on page 137, *et seq.*, is too short to be of any value.

An Atlas of Clinical Microscopy.—By Alexander Peyer, M.D. Translated and edited by Alf. C. Girard, M.D. New York: D. Appleton & Co.

A Manual of Microscopic Technology, &c.—By Dr. Carl Friedlander. Translated by S. Y. Howell, M.A., M.D. New York: G. P. Putnam & Sons.

The first of these books is a most useful one to every medical man possessing a microscope. Most of the substances obtained from the fluids of the body, in disease (except those from tumors), will be found figured here. Nearly one-half the number of plates

are devoted to urinary deposits and substances found in urine. Fourteen plates represent substances present in sputum. Other plates are devoted to blood, vomit, contents of stool, etc.; in all, ninety plates. The American public owe a debt of gratitude to Dr. Girard for the English translation of Dr. Peyer's useful little book. In the act of translation, however, it has really been TRANSLATED, as it is more than twice the dimensions of the German first edition, with only eleven extra plates. In this condition it certainly makes a much more imposing volume. The plates are all well executed, and reflect great credit on the publishers.

Friedlander's manual translated by Coe has already been referred to on page 227 of this JOURNAL. Dr. Howell's translation has the advantage of a few foot-notes, but the disadvantage of having no index. Either of these editions would be a most useful and in many respects an almost necessary accompaniment of Peyer's Atlas.

Without the slightest hesitation we advise every practitioner or medical student having a microscope to secure both these valuable additions to our literature.

Books and Pamphlets Received.

BRAIN-REST: Being a Disquisition on the Curative Properties of Prolonged Sleep. By T. Leonard Corning, M.D. Second edition. New York and London, G. P. Putnam's Sons.

PSYCHIATRY: A Clinical Treatise on Diseases of the Fore-brain, based upon a study of its structure, functions and nutrition. By Theodor Meynert, M.D. Translated by B. Sache, M.D. Part I.—The Anatomy, Physiology and Chemistry of the Brain. New York and London, G. P. Putnam's Sons.

BASIC AURAL DYSCRASIA AND VASCULAR DEAFNESS: A New System of Aural Therapeutics and Pathology. Also, Notes on the Deafnesses. By R. T Cooper, M.A., M.D., Univ. Dubl. London, Baillierè, Tindall & Cox.

LECTURES ON SYPHILIS. By G. Frank Lydston, M.D. Chicago, A. M. Wood & Co.

TEXT-BOOK OF OPHTHALMOSCOPY. By Edward G. Loring, M.D. Part I. New York, D. Appleton & Co.

THE FIELD AND LIMITATION OF THE OPERATIVE SURGERY OF THE HUMAN BRAIN. By J. B. Roberts, A.M., M.D. Philadelphia, P. Blakiston, Son & Co.

PUERPERAL CONVALESCENCE AND THE DISEASES OF THE PUERPERAL PERIOD. By Joseph Kucher, M.D. New York, J. H. Vail & Co.

LETTERS FROM A MOTHER TO A MOTHER ON THE FORMATION, GROWTH AND CARE OF THE TEETH. By Mrs. M. W. J. Philadelphia, Welch Dental Co.

TRANSACTIONS OF THE ACADEMY OF MEDICINE IN IRELAND. Vol. III. Edited by Wm. Thomson, M.A., F.R.C.S. Dublin, Fannin & Co.

Society Proceedings.

CHATHAM MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, Dec. 8th, 1885.

JOHN L. BRAY, M.D., PRESIDENT, IN THE CHAIR.

(*From our own Correspondent.*)

Scirrhus of the Pancreas.—DR. TYE exhibited this specimen, also portions of the liver and lungs of the same subject, showing secondary deposits to a marked extent. The duodenal end of the pancreas was chiefly involved, although hard masses were scattered through the entire organ. The gall-bladder was shrunken and small. The stomach appeared normal. The patient, aged 55, had always been a healthy man. When first seen by Dr. Tye he had a tired, worn, anxious look, and complained of persistent pain in the epigastric region. This pain, which was referred latterly more to the right hypochondriac region, and emaciation were the only marked symptoms he suffered from. He rarely vomited or complained of nausea. Bowels were usually constipated, probably due to the opiates required to alleviate his sufferings. There was no tenderness, no elevation of temperature at any time, and no jaundice. Fatty foods did not apparently disagree with him, and the fæces were natural whenever examined.

A Case of Placenta Prævia, with Albuminuria.—DR. HOLMES narrated a case of "central implantation" at which he had been in attendance during the past two days. He was called to the country early yesterday morning to see the patient, aged 18, a primipara. She had been flowing some during the previous two days, with this exception, there had been no loss of blood during her pregnancy. An examination revealed a placental presentation, the cervix being dilated sufficiently to admit the forefinger. She had slight pains and a fair pulse. Nausea and headache during the past few days led to an examination of the urine, which was found to contain considerable albumen. A tampon saturated with a solution of corrosive sublimate 1 to 1500 was at once introduced. Ergot was administered, and pains became stronger and more regular. Towards evening, as the result of a consultation, the tampon was removed, and was immediately followed by a profuse gush of blood. Another tampon was quickly introduced, and the hemorrhage at once controlled. The loss of blood by this procedure, amounting to not more than a small cupful, made a very marked impression, from which she

did not rally for some time. About midnight she had a slight convulsion, became pulseless, and seemed almost in *articulo mortis*. Two drachms of ether were injected subcutaneously, and had an almost instantaneous beneficial effect. Shortly after, to give rest and quiet to the nervous system, ¼-grain of morphia was given hypodermically; this was repeated in an hour, and produced several hours of quiet sleep. Nutrient enemata of beef peptonoids and peptonized milk were used every two or three hours, her stomach not retaining any nourishment. At one o'clock to-day the tampon was again removed and the cervix found fully dilated, and placentæ about completely separated, there being no hemorrhage. Ergot was again given hypodermically, and pains soon followed; the placenta, shortly after, expelled into vagina and removed; forceps applied, and child extracted. The mother was still alive, but in a very precarious condition. Dr. Holmes remarked in conclusion that he regretted the removal of the tampon in the first instance, and considered that if a tampon was antiseptic, and there was no elevation of temperature, it should be allowed to remain until forcibly expelled or bulging is pronounced.

Report of an Outbreak of Diphtheria.—Dr. McKeough read a lengthy history of a recent epidemic of diphtheria which occurred in the parish of Pain Court. This district, which is inhabited by about 250 families, exclusively French Canadians, adjoins the Dover Plains, in the County of Kent, notorious for its malaria and ague. The land is low and flat, the soil a rich clay, and the locality an agricultural one. From one end to the other runs a creek which is the principal source of drainage for the entire district. This creek is a running stream during the spring months; throughout the remainder of the year it is either dry or contains stagnant water. The greater number of the inhabitants live along the banks of the creek. Malarious fevers are common to this region; typhoid fever is rare; scarlatina and diphtheria occur sporadically, but there has been no cases of either during the past two years till this outbreak, the first case of which occurred in September. Regarding its origin, in the first family afflicted there were two possible factors in the causation. 1st, The fact that two years previously diphtheria ravaged this family, and the poison remaining dormant may have again become active. 2nd, The presence of the stagnant, filthy creek which passed not twenty yards from the house. The most careful inquiry failed to elicit any other possible source of contagion. The second case occurred within a week of the first in a family living five miles distant down the source of the creek.

There was no communication whatever between the two families. The creek passed directly in front of the infected house, a few large elm trees intervening. The bed of the creek is deeper here than in other parts of its course, and the rain-fall during the past summer being heavy, as a result there had been a pool of stagnant water here some months. In this case the health of the child afflicted may have predisposed it to the disease, having been unwell for some weeks and suffered from a "sore throat." Drs. Wood and Formand state that the inflammation of an acute pharyngitis is capable of developing the common micrococcus of the mouth into a condition in which it becomes capable of producing all the characteristic phenomena of diphtheria. It is possible, also, that the germs of the disease in the cases which occurred two years ago may have been carried down the creek and lodged in this stagnant pool, lying latent, and becoming active at this time from unknown reasons. Whatever may have been the immediate origin of this outbreak, there can be no doubt that its diffusion was owing to its contagious nature Contact with or close proximity to an infected person was the chief mode of communication. There were instances, however, in which the poison was conveyed several miles to children by a parent not affected with the disease. The first family affected lived on the verge of the parish surrounded mainly by English-speaking people thoroughly aware of the contagious nature of the disease, which ideas were imparted to their more immediate French neighbors. As a result, although five in this house contracted the disease, no evidence could be obtained of the disease spreading from this family. On the other hand, the second family attacked were surrounded, somewhat thickly too, by French-Canadians, who did not believe in the contagious nature of diphtheria. Here the disease spread most rapidly and disastrously. Within three months 47 cases occurred, with 18 deaths—16 from laryngo-tracheal diphtheria, 1 from asthenia, and 1 from paralysis of the heart. Only 7 of the 47 cases received medical treatment; 2 of these were seen after "croup" had developed, and both died, the other 5 recovered. With the exception of the strong tendency of the disease to affect the larynx and trachea, the epidemic was not of a malignant type. The membrane was of a pearly greyish-white color, and thin; there was but little hyperæmia and œdema of the fauces; not much glandular induration even in those cases in which the membrane was limited to the fauces. An analysis of the deaths in reference to age bears out previous statistics. Between the ages of 1 and 5, there were 22 attacked, and 17 deaths; between

the ages of 5 and 10, there were 21 cases and 1 death; between the ages of 10 and 15, there were three cases and no deaths; and one adult only sickened with it. Clinical evidence was plentiful towards proving the intimate relationship between diphtheria and the so-called "true croup."

Dr. Rutherford, in the discussion upon this paper, referring to the constitutional nature of diphtheria, related the history of a case in which a father who nursed a child through a severe attack of the disease, and who at no time felt any throat symptoms, still, some three weeks subsequently, had paralysis of the soft-palate.

HAMILTON MEDICAL & SURGICAL SOCIETY.

(*From our own Correspondent.*)

The annual meeting of this Society was held at the Royal Hotel, Hamilton, January 5th, 1886, a large number of members being present.

Dr. Cochrane tendered his resignation, which was accepted.

The following officers were elected for the ensuing year:—President, Dr. Stark; Vice-President, Dr. McCargow; Secretary-Treasurer, Dr. F. E. Woolverton.

Dr. Shaw related a case of *Hemorrhage from the Bowels in an Infant*, which occurred in his practice. The child was born on the 24th December last. The labor was natural and easy. On the 26th, fifty hours after birth, the child passed blood from the anus in considerable quantity, and looked pale and feeble. It was nursed on the third and fourth days, but died shortly afterwards. It was the mother's third confinement. There is a history of phthisis in the family. Dr. Shaw, after giving the causes and treatment of this condition, stated that Dr. West had seen 23 cases of hemorrhage from the bowels in infants, with a mortality of 50 per cent.

Dr. Mackelcan said he saw two cases, one proving fatal. Family history good.

Dr. Malloch saw a case in January 1880, which terminated fatally.

CANADA

Medical and Surgical Journal.

MONTREAL, FEBRUARY, 1886.

THE INTERNATIONAL MEDICAL CONGRESS.

In our last issue we published gladly a letter fram Dr. Brodie of Detroit, whose opinions on the subject of the International Medical Congress are doubtless shared by a considerable section of the profession in America, but, in spite of his communication, we still adhere to the position taken by us in December. We then said that, to attract the workers of other countries, the sections of the Congress must be controlled by the men most eminent in their respective departments, and we maintained that the officers so far nominated did not, with a few exceptions, rise above respectable mediocrity. In the spirit of the "Declaration of Independence," we agree with Dr. Brodie that the gentlemen in question are "the peers of any member of the profession in the United States," but the Congress is a *scientific organization*, and the executive and sections have, heretofore, been composed of the best minds of the country in which it has met. What we maintain is that many of the sections, as at present organized, are controlled by men who, evidently, have not the confidence of the scientific workers in the United States, and are unknown abroad. At present, the prospect is that the *peers* of the men who organized the London Congress will be absent from the Washington meeting—the men who, in the United States, occupy positions in the medical world corresponding to those held by Gull, Jenner, Wilks, Erichsen, Paget, Fraser, Flower, and others who made the gathering of 1881 so brilliant. As well may we suppose that the British profession could have made that meeting the success it was without men of this stamp as that the American profession can do without the co-operation

of such men as Agnew, Bigelow, Hamilton, Da Costa, Pepper, Mitchell, Loomis, Bowditch, Billings, Dalton, Martin, Leidy, Lusk, Thomas, Barker, Jacobi, Wood, Bartholow, and others who remain irreconcilable. Bombast and bluster will not cover up the disagreeable truth which is quite evident to outsiders, if not to Dr. Brodie, that, unless the present executive of the Congress patch up this unseemly quarrel, the meeting of next year is doomed to failure. The recent attempts to effect a compromise do not appear to have been successful, and we can assure Dr. Brodie that, if matters remain as they are, "the most perfect and elaborate arrangements" will avail but little to attract foreigners in the absence from the sections of such a number of the men who have made American medicine and surgery what it is to-day. We sincerely trust that at the next meeting of the American Medical Association steps may be taken to secure the needful harmony, without which, we repeat, it would be better to abandon the Congress.

THE ANTI-VACCINATION LEAGUE.

We received a few days ago the prospectus of the "Canadian Anti-Compulsory Vaccination League." From the name we would imagine that the object of the Society was only to resist compulsory vaccination, but on reading further we find, also, the "object and purposes of the League is (*sic*) to enlighten the public mind on the fallacies and perils of vaccination." There is the usual howl about the natural rights of man and liberty. *Right* to give smallpox to their neighbors, and *Liberty* to send thousands to an early grave. Why, they might as well advocate the right of any man to set fire to his house, and so, perchance, destroy the property of his neighbors; but it is useless to argue with such people. Their disbelief in vaccination does not arise from evidence, and so will not yield to evidence. Partial statistics from the Civic Hospitals are given of smallpox in the vaccinated and unvaccinated which are utterly unreliable, and garbled extracts are quoted from certain works on medicine. They are careful not to give any statistics of the comparative mortality from smallpox in the vaccinated and unvaccinated. The usual ridiculous assertion is made that vaccination during

an epidemic of smallpox propagates the disease, and for proof it is said that as soon as the demand for increased vaccination began in Montreal so did the death-rate increase. This is a *post-hoc* argument with a vengeance. But why say more of a prospectus which is full of such assertions? The fact that the *League* boasts for its president a person who has made himself notorious by the publication of circulars of the most unprofessional kind—dealing wholly with sexual matters, and carefully calculated to take in the young, the foolish and the unsophisticated—a person who was reported to have dealt with the diploma-monger Buchanan for a degree—is sufficient. This man is now posing as the friend of the oppressed and the champion of anti-vaccination.

We are surprised to see some respectable names in such company, and associated in a crusade against reason and common sense. Of course in every community there are a certain number of cranks, irrationals and fanatics who will join any society which has *anti* emblazoned on its flag, and so the League will not want for members. The advisory council is composed of no less than four medical men (three French). The advice of such men who are unable to draw proper deductions from the overwhelming evidences in favor of vaccination will, we opine, be of no great value. If it is not too presumptuous, we should like to offer this young society a motto which to us seems very suitable, "*Suppressio veri, suggestio falsi.*"

Origin of the Smallpox Epidemic.—The sub-committee of the Board of Health appointed to enquire into this matter have made a report, which they have caused to be published. They addressed enquiries in writing to those persons whom they believed capable of aiding in their investigations. Most of these sent replies, and upon them the report is based. The conclusions arrived at bear out in every way the account already given in this Journal (issues for April and July, 1885). This city up to February last was free from smallpox. On the 28th February, a Pullman car conductor was admitted with that disease into the Hotel-Dieu Hospital (the former

Civic Hospital being at that time closed). No evidence is adduced to show that isolation was carried out. On the 1st of April one Pelagie Robichaud died in the same institution from smallpox. This woman was a servant in the hospital, and there is reason to believe had had access to the patient above alluded to. "Her decease is immediately followed by such a large number of other cases among the persons in the establishment that it is thought necessary, to save the establishment itself, to dismiss all the patients presenting no symptoms of the contagion and who could go home. What must have been the consequence for the city of sending away the patients at the Hotel-Dieu by the decision of the 14th of April, when the Rev. Sister Superior of this house said to us that 'From the 8th to the 18th of April we counted sixteen cases of smallpox removed from the Hotel-Dieu to the Civic Hospital?'" The folly of this step we have previously discussed. Thus, the report clearly attributes the outbreak to the original focus in the Hotel-Dieu, which, having attained within its walls a certain force, was allowed to expand itself in all directions by sending to their homes many persons already in the stage of incubation. The Committee then proceeds to make certain suggestions to prevent the possible recurrence of a similar calamity in the future. They are sound, and are chiefly as follows:—That a civic smallpox hospital should be *always* open, provided with such a staff as circumstances may indicate. That the Medical Health Officer should be well posted as to the sanitary state of the various cities on the railroad lines communicating with Montreal. That any case of smallpox in the city should be at once isolated in the hospital. That steps be taken to guard the city against contamination from the surrounding municipalities. Finally, they urge the systematic vaccination of all young children, and to this end recognize the necessity for a register of births. The report and the evidence taken are published *in extenso* in pamphlet form, and is an official history of the outbreak. It is to be devoutly hoped that the practical suggestions made will never be lost sight of by our Board of Health.

A FILTHY ADVERTISEMENT.

In one of the leading dailies of this city of a few days ago our attention was directed to an advertisement which, for pure filth and deceit, exceeds anything we have ever seen printed in a paper which finds its way to the hearths of many thousand families in our land. It is headed in large type—"*Errors of Youth! Sufferers from Nervous Debility! Youthful Indiscretions! Lost Manhood! Be your own Physician.*" And to revive the drooping spirits of the afflicted, there is a cut of an anchor, with the word "Hope" written across it. The "errors of youth" are to be speedily and certainly cured by the following prescription :—

℞ Cocaine, - - - ʒ ss.
Jerubebin, - - - ʒ ss.
Helonias Diocia, - ʒ ss.
Gelsemin, - - - gr. viii.
Ext. Ignatiæ Am., gr. ii.
Ext. Leptandra, - gr. xl.
Glycerine, - - - q. s. M.

Make 60 pills. Two to be taken daily.

It is adapted for either sex, and the advertisers are particular in stating that if it cannot be made up by the local druggist, they will be glad to forward sixty such pills for a dollar.

As the sixty pills contain $10 worth of cocaine alone, it is plain that it is all a fraud; but this, unfortunately, is not the worst feature of it, as every medical practitioner knows. The amount of harm, mentally, morally and physically, produced by such an advertisement is very great, and it is a lasting disgrace to the paper that publishes it. It is said these advertisements pay well. Of this there can be no doubt. If some of our newspapers, however, are ready to publish anything and everything that brings them money, it is time that the Legislature should prevent them. We have laws to prevent the importation of obscene literature from abroad. Let us, by all means, have laws to prevent newspapers publishing what is infinitely worse.

COLLAPSE OF THE LUNG.

Dr. Theodor Dunin of Warsaw has recently published in *Virchow's Archives* an account of the minute anatomical changes occurring in collapse of the lung from compression. This study being almost the only literature on the subject, though pulmonary collapse through bronchial obstruction and pulmonary cirrhosis from extension of fibroid pleurisy, are fairly well understood. Three fatal cases and twenty experiments on cats and rabbits (by external pneumothorax and pleural effusion from repeated small injections of gelatinue solution) have led him to conclude that the essential results of compression are at first flattening of the alveoli, compression of their capillaries and degeneration of their epithelium, and, later, that the flattened alveolar walls themselves, their capillaries now completely obliterated, are formed into fibroid strands and meshes. He considers the change a degenerative one, largely due to interference with the blood supply, and differing from collapse through bronchial obstruction by the absence of any active catarrhal pneumonia. A small-cell proliferation about the smaller bronchi going on to fibroid change he attributes to irritation from the retained bronchial secretion. The fibrous tissue both from this source and from the degenerated alveolar walls would have, he thinks, but little influence in preventing the re-expansion of the lung compared with that exerted by external pleuritic adhesions—a theory which certainly accords with the clinical features of these cases, since a lung, even if long compressed, may expand perfectly, provided the pleura be not much thickened. It would be interesting to know how far these changes may proceed without precluding the possibility of complete recovery. None of the cases observed were complicated by tubercle.

A NEUROTIC FORM OF GANGRENE OF THE EXTREMITIES.

The rare, but very interesting, disease known as symmetrical gangrene has been a prolific subject of debate from the time of Quesnay's description of it in 1749 up to the recent publications of Profs. Pitres and Vaillard. At one time it has been looked

upon as of vascular origin, while at other times its neurotic origin appeared to have most supporters. Ragnaud and Weiss have advanced the theories that the essential starting point is a functional derangement of the vaso-motor centre, through which a permanent contraction of the vessels is brought about—the arterioles, according to the former, and the smaller veins according to the latter. From the recent researches of Prof. Pitres and Vaillard, it appears that these views can be no longer maintained, but that we must look upon the disease as a neuritis of the peripheral nerves. They report in full, two cases of this disease where autopsies were obtained. The first occurred in a girl 24 years of age, who enjoyed good health up to her eighteenth year. From this out she became weak, and her limbs trembled and contractures of the lower extremities set in. On the 5th December, 1883, she was admitted into the hospital with gangrene of both feet (symmetrical). Two weeks later there were two symmetrical patches on the back; six weeks afterwards there was spontaneous amputation of the left foot at the ankle joint, the right foot hanging by a few threads. In various parts of the body there was superficial sloughs. Death occurred just two months after the disease was first noticed. At the autopsy, the nerves of the gangrenous parts presented marked alterations. The right anterior tibial nerve had hardly a healthy fibre left. The nerve fibres of all the affected parts had lost their myelin sheaths, and between them was situated fat-drops and leucocytes.

The second case occurred in a woman aged 56. It began with loss of sensation in the soles of the feet, followed, four months afterwards, by vesicles and swelling of the feet. When admitted into hospital in January, 1884, the patient had a normal temperature. There was great œdema of the left foot, with ecchymotic patches under the nails. The whole foot had a bluish appearance. It was cold and devoid of feeling. The right was similarly, although not so extensively, affected. There was neither sugar or albumen in the urine. The patient died two weeks after admission in a comatose state, the gangrene in the meantime having made such progress that both feet were in a mummified condition. The only changes of moment noticed at the post-mortem were the extensive alterations in the nerves of

the gangrenous parts. The internal plantar and the posterior tibial nerves showed the most extensive alterations. In some parts there was complete destruction of the fibres, while in all parts they had suffered more or less. There was no clotting in any of the vessels of the limbs.

An account is given of a case of gangrene of both lower extremities in an old man from embolism, where the most careful histological examination failed to find any changes whatever in the nerves of the gangreneous parts.

The authors consider that they are justified in coming to the following conclusions from the observations they have made on the three cases just briefly detailed :

1. That there is a form of symmetrical gangrene of the extremities which is not brought about by the commonly recognized causes of this disease, as cardiac and circulatory disturbances, septic infection, or traumatism.

2. That in this form there is in the nerves of the parts deep changes, constituting parenchymatous nephritis.

3. The neuritis is not caused by the gangrene, as it is not found in gangrene from occlusion of the vessels. It is probable that the neuritis causes the gangrene.

4. In addition to the usual form of spontaneous gangrene of the extremities, there is a so-called neurotic gangrene which resembles, in its symptoms and development, other forms of trophic disorders which follow inflammation or degeneration of the peripheral nerves.

THE BOWMAN LECTURE.

The Bowman lecturer for the present year was Dr. Hughlings Jackson. His subject was " Ophthalmology and Diseases of the Nervous System." The address, which is a masterly one, had for its main object the setting forth of the necessity for specialism in medical work, especially specialism combined with co-operation. In scientific as well as in social progress, there were four degrees or stages to be noted. The advance of scientific medicine depends upon increased differentation of work and definiteness of observation, combined with increased integration of knowledge and co-operation of workers. " Specialists have to justify them-

selves to justify their differentation. Increasing differentation without increasing definiteness would only be confusion." That the ophthalmologists have justified their differentation there is abundant proof; the lecturer specially noted the work done by them in ocular paralysis and on abnormalities of refraction. As a justification for neurology, the lecturer instanced Charcot's work. If justification was needed for the neurologists, it would be more than found in Dr. Jackson's own splendid achievements in this field.

The address was principally taken up with a description of idiopathic epilepsy, showing how necessary it was for the full and complete elucidation of this subject to have the special work of a large number of specialists. The neurologists, the alienists, the ophthalmologists and the physiologists will all find in this one subject work of a special character, and it is only by the co-operation of such a band of workers that we will be enabled to understand the disease in question.

Incidentally the lecturer advanced the hypothesis that there is atrophy of cells of centres for organic parts, like the atrophy of cells of the anterior horns. Diabetes may be owing to progressing atrophy of cells of that part of the great vaso-motor centre which especially governs the hepatic artery. It was also suggested that Graves' disease and myxœdema have a somewhat similar central pathology. The rich suggestiveness of these and many other hypotheses advanced by Dr. Jackson will well repay the physician's closest attention. Dr. Jackson's utterances to the medical world are all characterized by great originality and honesty, and this his latest production is no exception.

Presentation to Dr. Mewburn.—Dr. Mewburn, who was formerly resident medical officer in the Montreal General Hospital, has served during the past four years as house surgeon of the Winnipeg General Hospital. In this capacity he has gained the respect of the hospital authorities and the profession generally. He has now left Winnipeg to take medical charge of the Galt Coal Mines. Before leaving, he was presented with an address, together with a gold watch and chain, by the members of the profession in the city, to express the great

esteem in which he is held. The students of the medical school also made a presentation, with many good wishes for his future prosperity. We congratulate the Doctor, and wish him success in his new sphere.

Dr. D. W. Eberts, who was serving as resident medical officer at the Montreal General Hospital, has been chosen as Dr. Mewburn's successor, and has gone West to assume his new duties. He carries with him the best wishes of his friends in Montreal for his advancement and success.

—We observe that Dr. Piffard has retired from his editorial connection with the *Journal of Cutaneous and Venereal Diseases*. The *Journal* will be continued under the sole editorial charge of Dr. P. Morrow. We may remind our readers that this is the only publication in the English language devoted to skin and venereal diseases, and during the three years of its existence it has won for itself a high reputation for scientific excellence as well as practical utility. In addition to presenting all that is new and valuable in these special departments, the colored lithographs and wood engravings with which the original articles are illustrated are worth more than the price of subscription.

—At the annual meeting of the Huron Medical Association, held in Seaforth on the 16th ult., the following officers were appointed for the ensuing year:—President—Dr. Campbell, Seaforth; Vice-President—Dr. Young, Londesboro'; Secretary—Dr. Worthington, Clinton. The attendance at the meeting was good, and the number of cases presented exceeded that of any previous meeting of this vigorous and progressive medical society. In our next number we hope to give a full account of the proceedings.

Personal.

Dr. Phillippe Wells of Quebec has been appointed member of the Central Board of Health, to fill the vacany caused by the death of Dr. Marsden.

Dr. C. S. Parke of Quebec has been named commissioner of the Marine Hospital of that city, to replace the late Dr. Marsden.

Prof. Strümpell, of Leipzig, has been appointed to succeed Leube as director of the medical clinic of the University of Erlangen. Prof. Strümpell is one of the most active and hard working of German physicians.

Medical Items.

—The conduct of Dr. Heywood Smith in reference to the girl Eliza Armstrong has been investigated by the Royal College of Physicians, and at a meeting held on the 18th December the following resolution was adopted: "The College having considered the statements made by Dr. Heywood Smith and his apology through the Censor's Board, while acquitting him of deliberate attempt to do evil, desires to put on record an opinion that he has committed a grievous error in connection with the Armstrong abduction case, which has brought discredit on himself and the profession to which he belongs. The College, therefore, regards his conduct as deserving the severest censure, and requests the President to express the views of the College and to reprimand him accordingly."

Medical Honors.—Dr. Paget of Cambridge and Dr. William Roberts of Manchester have received the honor of knighthood. Dr. Paget, who was until recently the President of the General Medical Council, owes his elevation to the active and distinguished part he has taken in founding what is now one of the most important medical schools in the United Kingdom—the Medical School of the University of Cambridge. Dr. Roberts is well known as one of the leading scientific physicians of the present time. His work on the kidneys is a classical production, but in his contributions to the therapeutics of digestion we have a still more enduring memorial of what can be done by a physician who who has the will to work. The great practical results that have been already achieved by his method of treating cases of difficult digestion in the course of acute and chronic disease prove it to be one of the most important therapeutic advances of the past decade. It is to be hoped that both these gentlemen will long be spared to wear their honors and grace our profession.

—The *Medical Age* thus discourses: "The rectum bids fair to be a bigger bonanza to the doctors than ever the womb has been. It appertains to both sexes and all ages. From the great-grandfather to the neonatus, the rectum offers itself for inspection and treatment. And the beauty of it is, it suits all tastes in its tolerance of attention. The surgeon can cut it, tear it, cauterize it; blister and burn it; he can expand it, contract it, pinch it and pucker it; plug it and unplug it. The barber can barber it; the leecher can leech it; even the midwife can anoint it, syringe it and empty it. The doctor can doctor it in any way he pleases. It takes big doses with composure and little doses with a quick response. It is susceptible

of medication both directly and indirectly, and it is a portion of the economy so universally necessary to the comfort, health and life of every single member of the human family, that in its possibilities there is, so to speak, no end to it. However it may be treated, whether by expert or neophite, it is senseless, earless, eyeless. However much the viscus may be damaged, in the course of its experiences, its hapless owner can't see it and be a reliable witness to malpractice in a court of justice. He can't by sight count its scars, measure in inches the depth of his sphinctral misery. Any error in diagnosis or failure in treatment, while necessarily fundamental and possibly serious in its consequences, is easily covered up, for, with a little alum or tannin properly applied, so far as giving anything away is concerned, the rectum may be rendered as 'tight as a drum.' The failure, should it occur, may be attributed to a 'cold,' or some indiscretion in diet, or to atmospheric or telluric disturbances, to all of which the rectum is highly sensitive. A sudden and unforeseen onset of microbes may upset the calculations and predictions of the most skilful and astute physician, and render negative his best endeavors. To the coming doctor the rectum presents an opening compared to which a malposed womb or dislocated ovary is nothing worth a thought. In a word, the womb of the future is pregnant with golden possibilities regarding the rectum."

"Mellin's Food.—This preparation is, in fact, an excellent attempt to give the extractive and soluble portion of Liebig's food, without the cellular and indigestible part of the meal. In other preparations of this class this was partially avoided, but not wholly so, by straining. There is no evidence of starch remaining in this preparation, it having been all converted into grape-sugar and dextrine, and there is no reason to believe that it is prepared from anything but malt and wheat. As a food for delicate infants, there can be no question as to its great value."—*Medical Press and Circular, London.*

Lactopeptine.—We have used this article for some time in cases of indigestion, and can recommend it as a valuable remedy. Being a compound of the five active agents which are contained in the process of digestiou, it cannot fail to aid the system in preparing the food for assimilation. It is an invaluable remedy in the summer diarrhœa of children. Owing to its great impairment of the vital forces, and feeble powers of the digestive tract, food frequently irritates and increases the difficulty. For such cases we learn of no agent in the Materia Medica as reliable as Lactopeptine.—*Cal. Med. Jour.*

CANADA
MEDICAL & SURGICAL JOURNAL
MARCH, 1886.

Original Communications.

CLINICAL LECTURE.

By PROF. WILLIAM PEPPER, M.D., of Philadelphia.

Delivered in the Hospital of the University of Pennsylvania, February 6th

Bright's Disease.

Here is a case, gentlemen, that possesses several points of interest, and will afford me the opportunity of making some practical remarks. This man offers a past history of exposure and a reckless life, so that when he came into the hospital, suffering with an acute attack of kidney disease, we were justified in supposing that he had a chronic, latent Bright's disease, and that his present illness was an acute exacerbation of his chronic disease. He came to us with great and rapidly-increasing anasarca, his urine was dark and thick. The general symptoms, the constitutional derangement, were not so great as one would expect to find in cases where the kidneys were evidently so much deranged as the localized symptoms (the dropsy and the condition of the urine) would indicate that they were in this case, and this fact lent additional force to the view that the present attack was an acute exacerbation of a chronic condition, for it demonstrated to us that the system had created a tolerance of the pernicious influence of the disease, which could only have been caused by a long existence of the disease in a latent condition. It is a fact that in those who are the subjects of chronic Bright's disease, acute attacks of the same may supervene without causing anything like that amount of systemic perturba-

tion that will occur in those who were previously well. Therefore the very tolerance of the disease which this man displayed was a bad omen for his recovery. The anasarca was enormous, the urine was scanty, and the proportion of albumen was very great. I feared the development of uræmic symptoms, and so decided upon a brisk depurative course. As he had considerable gastric disturbance, I was loth to give medicine by the stomach for this purpose, particularly those of an irritant character, and I therefore decided upon diaphoretics in preference to purgatives. On the 24th of January he was given 30 minims of the fluid extract of jaborandi in the morning. This caused a very free sweating. His diet was confined to milk, of which he was given three pints in twenty-four hours. While he had been passing only about twenty ounces of urine daily, the day he took the jaborandi he passed thirty ounces. On the 25th, his bowels were moved, and he was still sweating, showing how powerful and how lasting are the effects of jaborandi. On the 26th, he was given another similar dose of jaborandi, when he again sweated very freely, and when it was noted that during the sweat he had lost five pounds in weight. As this was the only time he was weighed, there might have possibly been some inaccuracy, but, in future, I will have him carefully weighed before and after each sweating. The headache of which he had complained all along still continued.

I would call your attention to the action which jaborandi here had on the urinary secretion, increasing it from twenty to thirty ounces. I have repeatedly observed this action. Not only does this drug cause sweating, salivation, and sometimes watery vomiting, but it is also a most admirable diuretic ; it promotes a great watery drain from the system, and I think that there is no drug comparable to it to remove fluid accumulations.

On the 28th, he was again given jaborandi, and again sweated profusely. After this it is noted that he breathes easier, there are less râles, and the œdema is less. On the 31st, the dose was again repeated, since which time it has been given on alternate days. He is still very considerably water-logged, but the œdema is much less marked than it was. The arms show less

improvement in this respect than do the other portions of the body. Let us here note the difference between the dropsy from heart disease and that from disease of the kidneys. In cardiac dropsy we may have the legs and belly swollen and the lungs congested, but, as a rule, the dropsy will diminish as we go from the periphery towards the centre, and we will have none in the hands and arms; neither would the face be puffy in cardiac dropsy unless kidney disease co-existed with it. The reason for this is that in cardiac dropsy the cause is purely mechanical, a mechanical interference with the venous circulation, in consequence of which the watery constituents of the blood are forced out into the cellular tissue. This dropsy will therefore naturally occur most where there is the most impediment to the circulation; the further we get away from the heart, the greater will be the obstruction, since the diseased heart will not be able to force the blood along with its accustomed power. So, also, the force of gravity will favor dropsy in the lower limbs. Now, in renal dropsy, there is, of course a mechanical influence at work, but this is the least important factor; the blood is loaded with effete matter, on account of which the capillaries seem unwilling to let it pass through their walls, the suction action of the tissues, which is so essential to terminal circulation, is less, there is a torpid state of molecular tissue interchange, so that while the dropsy of cardiac disease is a propulsive dropsy, the water is forced out because the blood does not properly circulate, it is in renal disease more of a functional dropsy, so to speak, the water escapes because the blood stagnates, because, owing to lessened molecular interchange, there is less invitation, less inducement, less suction to aid the blood in its course through the capillaries. This explains why, in renal dropsy, we have the effusion everywhere, in all parts of the body, why it is so universal. There is still another reason; we must remember that Bright's disease is, in reality, not a local disease, but a general or constitutional disorder that has its seat of greatest manifestation in the kidney. Acute nephritis is, of course, a local disease, but when it has existed for some time, when it has become chronic, or when we have it coming on in that slow, insidious manner, so characteristic of Bright's disease, then the whole system is really involved.

The sheaths of the vessels are involved, and there is widespread tissue change, of which the disease of the kidney is but the most prominent part. So we have general constitutional disturbance, a local disease of the vessels everywhere that tends to favor the transudation of fluid. Very often, in renal disease, the dropsy will make irregular manifestations, appearing in one place and not in another on account of those conditions we have mentioned. In cardiac dropsy, the feet will oftentimes be swollen when the patient is walking or standing, when, however, he lies down over-night, when he rises in the morning it will be gone and will maybe show itself in the face ; the water is free to move in conformity with the laws of gravity. In renal dropsy there is some of this influence, but the local causes I have mentioned have much more influence. These changes, this view of the constitutional nature of Bright's disease will do much to explain to us the varied symptoms and complications of kidney disease, the brain lesions, the hemorrhages, the retinal affections, the heart complications and the inflammations of serous membranes, so that we must consider that we have more than merely a poisoned blood, we have widespread lesion of the capillaries. This fact will have a great bearing on our treatment and prognosis. In proportion as the system has suffered, so will be our prognosis ; where the systemic implication is great, there will the prognosis be unfavorable, and *vice versâ*. If the disease be localized to the kidney, we will have more chance of affording relief by securing vicarious elimination of the urinary constituents. This is a difficult case in which to make a forecast. The urine has been persistently bad, there is so much albumen that heat and nitric acid almost solidify it. We will continue the treatment of milk diet and jaborandi sweats on alternate days.

Chronic Bronchitis and Emphysema. Has the Man Phthisis ?

Here is a man who suffers from gastralgia, but his main troubles are chronic bronchitis and emphysema. His family history is bad, as there is found a tendency to pulmonary disease, and he himself has been frequently and continuously exposed to vicissitudes of temperature. For three years he has had a

cough, which, remitting in summer, became worse in winter, and latterly has been continuous. He has also, as I have said, suffered from gastralgia, which is persistent. He has lost his health and suffers from dyspnœa, requiring to be propped up in bed that he may breathe. His fingers are blue and clubbed, and he has a constant cough, with copious sputa, but has never had hæmoptysis. The pain of which he complains is located in the left, sometimes in the right, epigastrium, but never in the back. It is sometimes very severe, it is not increased by the ingestion of food, though it is affected by changes in the weather. He will always derive relief from taking raw whiskey and leaning forward so as to make pressure on the belly. The pain is usually midway between the seventh rib and the median line. The bowels are costive, the liver somewhat small, and the spleen slightly enlarged. No tumor can be detected, and there is no disease of the kidney. So, then, for a long time, he has had spells of pain that seem like neuralgia. It may be, for it does so happen that the diaphragm may be strained and some of the pain may be muscular ; it is not an uncommon thing in chronic bronchitis, on account of the violence of the coughing, to have a stretching or straining of the tendinous insertion of this muscle and consequent pain ; but in addition to this, I must admit that there are in this case paroxysms of acute pain of a neuralgic character, which comes in spells, and is relieved by the whiskey and pressure. While, then, I would refer the continuous pain to a stretching of the muscle, the paroxysms I would ascribe directly to the nerves and call gastralgia. This is, however, but an accidental complication of the main trouble, the chronic bronchitis and emphysema. Now a very important question arises in this case, one that is of vital interest to the patient, namely, whether his lungs have degenerated into a phthisical condition or not. How shall I go about ascertaining this? Well, in the first place, he has gained in weight since he has been in the hospital. He never was a very heavy man at any time, his best weight being about 145 pounds. When he came into the hospital, on the 10th of January, he only weighed 100 pounds, but since then he has gained 9 pounds. Although the sputa have been repeatedly examined for them, no bacilli have ever been

found. At times a small amount of elastic fibre has been found in the sputa, but only occasionally, and not in the quantity that we would expect to see if the man had phthisis. The skin of his fingers is glossy, the nails are incurved, but the ends of the fingers are not markedly clubbed as we see them in phthisis. We frequently see this type of finger in chronic bronchitis, pleurisy and emphysema, quite as commonly as we do in phthisis, but in the latter disease there is more wasting of the finger, which makes the clubbed end that much more prominent by comparison. The man says that on the whole he feels easier than he did. Now when we inspect the chest, we find that the upper muscles of respiration are strongly marked, the shoulders are high, the spine rounded, but the chest is not quite so rounded or barrel-shaped as we are accustomed to have it described in emphysema. When we turn to the heart, we find that the impulse is scarcely perceptible, and it is best felt towards the epigastrium. The sounds are weak, but there is no murmur. The heart seems to be overlaid by the anterior edge of the left lung, which somewhat interferes with a thorough examination. When he breathes, there is very little expansion of the chest. The clavicles and sternum rise, but from the third or fourth rib downwards there is scarcely any true expansion, it is just merely an up and down movement. On percussion, there is marked resonance all over the back posteriorly, indeed it is not only marked, but I could truly say that the resonance is exaggerated, it is almost tympanitic, which justifies the expression of vesiculo-tympanitic. On auscultation, the vesicular murmur is found to be exceedingly feeble: over the whole of the lower lobe it can be hardly heard at all. On the left I can hear a few crackling râles. The weakness of the vesicular murmur I know is not due to the lung being pressed away from the chest wall, because if this were the case we would have dullness on percussion, whereas the exaggerated resonance proves to us conclusively that the lung is in direct apposition to the chest wall. But the feebleness of the vesicular murmur is due to the inability of expanding the lung which exists. This is a valuable sign, for, taken in connection with the exaggerated resonance, it is characteristic of emphysema. It is a fact that the presence of bronchitis

and emphysema is no proof against the existence of phthisis, for we might have a patch of degeneration anywhere. The reduced condition of the patient raises the suspicion of phthisis. In examining for this disease, we would, of course, first look to the apices of the lungs. I find nowhere any dullness, any blowing or cavernous respiration, and but the few râles I have mentioned; the same exaggerated resonance everywhere; everywhere the same wretchedly weak vesicular murmur on inspiration and a prolongation of the expiratory sound. There is no evidence of infiltration or consolidation. The habitual dyspnœa and the choking, smothering cough are characteristic of emphysema. There is not a free, full rush of air, as in other cough, hence it takes a long time to start the mucus. While the man has gone down hill, his descent has been very slow, for it has taken him eight years to lose forty pounds, and this downward course has been aided by a serious gastric complication. In ordinary phthisis, it seems to me, his failure of flesh would have been much more rapid. Then, again, he has recently gained in weight, and while it is true that we do sometimes see phthisical patients put on flesh (particularly if they have been removed from unfavorable to favorable surroundings), they do not maintain this gain. The absence of hæmoptysis is an important, though not a positive sign, for it is a fact that we may not have hæmoptysis in phthisis, while we may have it in emphysema; still, it is a sign of considerable value when taken in connection with the other symptoms. Again, he has had no fever, nor night sweats, nor diarrhœa. This marked and progressive dyspnœa is not a usual symptom in early phthisis, unless there is also emphysema, so that its presence here, with the other symptoms, favors the negative view. The expectoration also is opposed to the view of phthisis; it is not solid, there are no bacilli, and very little elastic tissue. In emphysema, we may have elastic tissue from the breaking down of the walls of the pulmonary vesicles. Coming down to the physical signs, which are the most important, we have a bilateral and symmetrical disease, there is no difference in the two sides, while in phthisis we usually find some difference. There is no point where we suddenly come upon cavernous or blowing respiration, it is the same

all over. The existence of bronchial râles on both sides may be taken as evidence of bronchitis and emphysema. In chronic phthisis we would find a cavity, which we do not. In miliary tuberculosis, where the tubercles are scattered throughout the lungs, we might find such symptoms as we have here, but it would be an acute case where the constitutional symptoms would be well marked and the patient would likely die before the physical signs of phthisis became evident. But here he has been sick for eight years. If he should suddenly take a turn for the worse, develop fever and night sweats, I would incline to the view that diseminated tuberculosis had occurred. I have seen such cases.

So, therefore, on the whole, I do not think that this man has phthisis. He is slowly improving, and when his stomach will tolerate them, I will give him tonic and nutrient remedies. The prognosis is comparatively favorable, so far as a fatal issue is concerned; he cannot be restored to vigor, his whole chest is blown up, he will always be short-winded, but he can be made so that he will be comparatively comfortable when he is quiet and avoids exertion.

THE "MEDICINE-MAN."

Or Indian and Eskimo Notions of Medicine.

A paper read before the Bathurst and Rideau Medical Association, Ottawa, 20th January, 1886.

By ROBERT BELL, M.D., LL.D.,
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Last year, having had the honor of reading before you a paper on "Diseases among the Indians," I would now beg to follow it with a short account of the notions of these people on the subject of medicine.

The science of medicine has now arrived at such perfection among civilized nations that we have almost forgotten the crude beginnings out of which our present knowledge has been gradually evolved. But from our pinnacle of learning, it is curious and interesting to observe the darkness amidst which some of our fellow-men are groping even yet. The false and mistaken notions as to the principles and practice of medicine which pre-

vailed among our forefathers are recalled by some of those in vogue among the red-men ; and while, in the light of our own superior knowledge, we may be disposed to laugh at their primitive ideas, we are reminded that many—perhaps the majority—of the doctrines once taught among our own people were absurd enough.

It is very difficult for a white man to learn precisely what the aborigines' views on medical subjects really are. Indians are by nature very reticent, and they appear to be afraid of ridicule ; or in some cases they are jealous of giving away what they consider valuable secrets. It is seldom, indeed, that a white man gains their confidence sufficiently to induce them to speak unreservedly on this subject. Even with a good knowledge of the Indian character, one requires to gain an insight into this subject by slow degrees—first, perhaps, by observing and studying their actions ; and after having ascertained a few facts, by judicious and serious questioning, as opportunities arise, one may build on these and ask further questions until he learns the greater part of what is current among them.

Many people speak of "the Indians" as if all tribes were alike in every respect. But, in truth, there are great differences. Those with whom I am best acquainted personally, from about thirty years' intercourse, are the various branches of the wide-spreading Cree or Outchipwai stock. I have also had some experience of the Eskimo, who differ widely from all the other aborigines of the continent, and who are not ranked as Indians at all.

Among the Outchipwais, the term "medicine" does not mean strictly material remedies or the practice of the healing art, but rather a general power or influence, of which that of drugs is only one variety. Hence a "medicine-man" is not simply a doctor of medicine, but a sort of priest, prophet, medium and soothsayer. He is also a juggler, conjurer, sorcerer or magician and general dealer in the supernatural. A mere knowledge of medicine proper is rather one of the lower or accessory branches of his profession, and it is often practiced by those who have no pretensions to be considered full-fledged medicine-men. Even women sometimes obtain great reputations as doctors. To the

medicine-man a knowledge of drugs is valuable, principally to enable him to carry out different kinds of poisoning as may best serve his ends. His most important function and the secret of his power is his dealing in occult influences.

In former times, the great medicine-men among these Indians devoted their whole lives to the study and practice of their art, and even yet it receives the greater part of their attention. They were accustomed to do no common work, but lived at the expense of the band they were amongst. They had great influence with the people, principally from preying upon the superstitious fears which had become inculcated by their own class from generation to generation for this express purpose. For the medicine-men form a secret society, with exclusive privileges, and they exercise a terrible influence in degrading their people. The seeming respect which is accorded to them is begotten of cowardly fear which has formed part of the education of the rank and file. They pretend to dispense good and bad luck, to control the weather, to be able to influence the movements of game and fish so as to bring plenty or starvation to the tribe, to predict events, to tell the fortunes of individuals, to bring about the sickness or death of men or dogs at a distance, and generally to have the confidence and coöperation of both good and bad spirits, with whom they communicate freely on certain set occasions.

The common people employ them in favor of themselves or their friends, or against their enemies, just as we do lawyers—for a consideration. It is here that the secret society business comes to their aid. Among the Outchipwai Indians there are many hypocrites who have not the manliness to fight their enemies fairly, or to openly resent an injury, or even to tell an adversary their opinion of him to his face. Such individuals will smile and profess great friendship, while harboring the bitterest enmity and even murderous designs. An Indian may be living at a considerable distance from the person he wishes to injure, and in order to gratify his revenge he will hire his medicine-man to carry out his purpose. But the latter will never appear on the scene. He will find means to operate secretly through another medicine-man who may not even be

suspected. As threats are thus often actually followed by the dire results predicted, persons who may chance to fall sick, or to meet with any accident, become accustomed to attribute their misfortune to the machinations of an enemy or to the ill-will of some medicine-man; and in order to counteract it, they must employ another medicine-man to remove the cause. Thus the established belief in the powers of the medicine-man brings much grist to his mill. The "opposing counsel" having received his fee, in the shape of some article of value to an Indian, will proceed with some grotesque ceremony and pretend to draw to himself and nullify the evil influence which has been troubling his client. He will affect to suck out the poison from the man's body or to go through agonies of pain, writhing and twisting himself amidst many groans, as if he were receiving, all at once, the essence of the disease of his patient. Or he may make-believe that he has been suddenly struck internally by some sharp instrument. The shock and accompanying exclamation are followed by spitting blood (usually from having surreptitiously lanced his gums) and the coughing up of an arrow-point, or a small piece of sharp bone or stone, which the evil spirit of the other sorcerer had transferred to him. In a short time the patient is expected to say he feels better; otherwise it is a sort of slight on the "strength" of the conjurer's "medicine." Sometimes the medicine-man will pretend to receive these sudden internal shocks to show the potency of some other member of the profession at a distance and the danger resulting therefrom, and hence the necessity for his own "strong medicine" as an antidote. He will then spit up the mysterious missile along with some blood, and after a groan or two will subside with a sigh of relief.

One of the modes of conveying an evil influence to a distance is to make a drawing on a piece of birch bark, or even in the sand, to represent the figure of the person to be injured, and then to select the site of the organ, as the heart, lungs, or bowels, which is to be operated upon. This is then stabbed through with a sharp instrument, or touched with poison, and an appropriate charm is repeated at the same time.

The apparent uncertainties of human life and fortune, and

death itself, are thus accounted for, all being controlled by the medicine-men. A person dies, not from natural causes, but because it is the pleasure of some one of this all-powerfull class that he should die, and because he has been unable to find another one powerful enough to counteract his " medicine."

In order to communicate with the spirits, the medicine-man must have a special kind of wigwam or retreat erected. This is done by planting a number of nicely trimmed poles in the ground in the form of a circle about five or six feet in diameter. They are fixed in the erect position by being firmly bound together by hoops at intervals, with a crowning one at the top. The poles are lashed to the hoops with spruce roots or other fastenings. This frame is securely enclosed with bark all the way up, so that no one can peep in, even if disposed to do so, which, however, is never attempted. The medicine-man then gets inside and fastens up the opening. He mutters and sings at intervals, and then maintains a perfect silence. Suddenly the medicine wigwam is violently shaken, after which it is announced that the spirits have arrived and he is ready to answer questions. I have been present on some of these occasions. A question must generally be accompanied by a fee, such as a plug of tobacco or a box of matches. The answers are given in a deep sepulchral voice, and are sometimes direct and positive, but oftener ambiguous, and, in the latter case, great ingenuity is sometimes shown in constructing an answer which will be verified, whichever way events may happen. Or instead of giving any answer, the attention of the audience (which is squatted around the wigwam) may be diverted from the main point of the interrogation by some poetic or entertaining "yarn." When fairly cornered the medicine-man will say the spirit refuses to answer, is offended or has just left for the day, his presence being suddenly required elsewhere. Of course, with experience and intelligence in his favor, the chances are more than even that his predictions will be fulfilled, and great stress is laid on every hit, while the failures are easily forgotten. In this way, even supertitious white servants of the Hudson's Bay Company and others come to have a certain faith in these conjurers. The practices of the Indian

medicine-man are evidently closely allied to the old-world witchcraft.

It may be asked whether these men are themselves sincere or believe in their own practices. In some cases and to some extent I think they do, but in others they are clearly guilty of fraud and trickery. I have known instances where, having become Christians, they have confessed that their former course had been all imposture. Some of them have, however, been known to become really possessed with terrible hallucinations.

In regard to the practice of medicine proper, the common Indian notion of disease is that it is caused by some evil influence, which must be removed, either by driving off its spirit with the tom-tom and singing, or by a charm, and by sucking or blowing upon the part affected. The idea of drawing or sucking out the evil is the prevailing one in their theory of the practice of medicine. A medical practitioner is thus associated with the nature of a leech. This is well illustrated in the custom of naming children. Names are given to Indian children by the grandfather or recognized patriarch of the family-circle or band. The subject of the first striking dream which he has after the child's birth determines its name. If he dreams of a creature which lives by drawing out his food as a woodpecker, which draws grubs out of trees, or of a leech, but particularly of the mosquito, that most determined and energetic blood-sucker, it is considered a good omen, and that the child, whether male or female, is to be regarded as called to the medical profession. If a male, as soon as he is grown up, he is put in training to ascertain if the Great Spirit really intends him to be a medicine-man. The first point in the student's education is to try his powers of endurance and to see if the spirits will reveal themselves to him. For this purpose he is submitted to tortures, as by cutting and running wooden skewers through his muscles and by starvation. The latter is carried out by his retiring to some unfrequented place close to good water, so that he may be tantalized. He selects a site on the brink of a river or on the end of a point in a lake, and there builds himself a sort of couch or nest in a tree, or a platform of poles between three or four trees standing close together, and stays upon it day after day without food or drink

until he become delirious, if he can stand it so long. At night he prays earnestly to the Great Spirit to reveal to him some new thing, and to give to him mysterious or supernatural power. Before he has had time to perish from hunger and thirst, his friends go to relieve him and to ascertain the result of his vigils. It is said there are many failures at the start. If, however, the candidate be deemed a suitable subject, he becomes articled to an old practitioner and duly initiated. Only one student is taken at a time. For some reason, perhaps want of superior intelligence and the necessary disposition, probationers, after having passed the first ordeal, are often rejected before they have learned much in regard to the mysteries of the profession.

Their materia medica is divided into two branches, good medicines and bad. Among the Crees, if not among other Indians, twenty classes of drugs are recognized. The first nine are all good or beneficial medicines, and the rest are all more or less bad or injurious. The student is first made familiar with the good medicines and then the bad, the worst of all being taught last. Some of their poisons, they pretend, are very dangerous to handle.

(*To be continued.*)

URETHRAL STRICTURE AND PERINEAL SECTION.

By J. A. GRANT, M.D., F.R.C.S. (Edin.), Ottawa.
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Read at January meeting Bathurst and Rideau Medical Association, Ottawa, 1886.

Case I.—A. D., aged 41 years, temperate habits and robust conformation, the subject of a very intractable stricture, the result of a fall in December, 1880, on the spike of a small tree, injuring the perineum, opposite the membranous portion of the urethra chiefly. No external wound of the parts was produced, but considerable contusion, swelling, and inability to urinate, except in dribbling quantities. Catheterism being impracticable, and there being almost complete inability to void urine, he entered the General Hospital, Ottawa, January 15, 1885, at which date perineal section was performed, and a No. 8 catheter introduced into the bladder and retained in position fully three days. Afterwards used the instrument every second or third day for fully three weeks, and then only occasionally as neces-

sity required. *April 4th*, '85—Was discharged from hospital, and in June, returned to his usual work well and active, and experiencing no inconvenience whatever as to urination.

Case II.—(*Reported by Dr. Prevost.*)—W. W., aged 18, entered hospital on 23rd March, 1885, with a slight attack of gonorrhœa, which disappeared rapidly and thoroughly. In May, while riding on a bicycle, fell off, injuring the perineum. Blood flowed freely from the urethra, and was unable to pass his water. Consulted a physician, and, under appropriate treatment, was enabled to empty his bladder, but only in the recumbent position. Next day, micturition was easier, but urine tinged with blood. During the week, patient passes his water pretty freely, but every day the stream diminishes, until the end of the week, when it comes out by drops, and finally is totally suppressed. Sees the doctor, who prescribes, I believe, Sp. Ether. Nitr. Again patient passes large quantity of blood with his urine. Slight pain during micturition. Since then, always great straining during micturition, the want of which, moderately frequent at first, became incessant. Constant incontinence of urine. Sometimes patient feels strong desire of making his water; a thin stream comes out, but immediately urine drops out, and continues, in spite of the efforts of the patient, who has to wear napkins. Tenesmus and great distress. Examination: Stricture membranous portion. Useless and repeated attempts to introduce even a No. 2 catheter. *Dec.* 19—Perineal section performed and catheter introduced. *20th*—Catheter removed. *31st*—Chloroform; introdudtion of a No. 8 elastic catheter, and left *in situ* for three days. Urine then flows freely through the penis, and hardly any through the wound. *Jan.* 6—Micturition not difficult; patient introduces the catheter himself.

Remarks.—The term perineal section should, according to Harrison of Liverpool, be rather called perineal puncture. The patient being placed in the lithotomy position, and a grooved staff introduced, I punctured the membranous portion of the urethra, about one inch in front of the anus, with a tenotomy knife, and enlarged the incision sufficiently to enable the groove in the staff to be felt with the index finger. I found it quite impossible to enter the bladder in either case with the small Symes' staff; or even by a small probe, *via* the urethral puncture. Under these circumstances, I adopted the aphorism of Sir Henry Thompson, "*If you cut at all, cut all*," and passed the small tenotomy knife forward from the end of the Symes'

staff, which only entered a small distance into the membranous urethra; through the *entire strictured* portion of the membranous urethra, into the bladder, the staff being firmly held in position, and taking care not to introduce the finger into the bladder, which might induce subsequent prostititis. The staff being now withdrawn, in the latter case a No. 6 elastic catheter was introduced into the bladder without difficulty and retained *in situ* for 36 hours, an elastic tube being attached for the convenience and comfort of the patient. In the boys case, for the first week the catheter was introduced daily, and afterwards every other day. The external wound closed without any unfavorable symptoms, and the lad left hospital about the end of the fourth week, being able to urinate freely. In the after treatment, it is exceedingly important to keep the divided parts of the stricture regularly dilated, otherwise division will prove a failure. According to Gross, the catheter may be, at first, introduced every third day, then once a week or once a fortnight, according to circumstances. In a recent case which came under my notice, and which had been of some years standing, Sir Henry Thompson, after dividing by internal urethrotomy (his favorite plan of operation), recommended the catheter to be introduced daily for some weeks after the operation. During a term of over thirty years practical experience, Sir Henry Thompson has only met with three cases in which, after much careful manipulation, he was unable to pass an instrument fairly into the bladder, and in these three instances only performed perineal section for the relief of stricture without a guide previously passed. (*Braithwaite's Retrospect*, Jan. '85, p. 146.) As to external urethrotomy, it doubtless has its dangers and trials. The late Sir Wm. Ferguson said that while he thought highly of even Symes' operation in certain cases, he was of opinion that, like all others in surgery wherein the knife is used, it is not free from hazards. In all such cases, it is important the patient should be instructed as to the use of the catheter in order to insure the successful completion of the after-treatment.

THE ACTION OF CERTAIN DRUGS AND POISONS ON THE HEART OF THE FISH.

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Last summer I was able to make an investigation on the physiology of the heart of the fish, Professor Brooks having kindly allowed me the advantages of the marine laboratory of the Johns-Hopkins University at Beaufort, North Carolina.

Part of this work consisted in an examination of the action of certain drugs and poisons on the heart, and so far as I know, for the first time for *this* animal.

Exceedingly little, if anything, is known of the action of such agents on the hearts of the cold-blooded animals, except in the case of the frog. This investigation demonstrates that in the fish the action of the drugs and poisons used is similar to what it has been shown to be for the frog by other investigators. (Ringer, Brunton, &c.) The results will be presented exactly as stated in my notes taken at the time, and without comment in most cases, leaving the reader to draw his own conclusions as to *mode* of action.

The fish chiefly used for these experiments was *Batrachus Tau*, popularly known as the "toad fish," a term indicating well its general appearance. It is a fish of great vital tenacity, and well suited in every way for physiological experiments generally. The hearts of most fishes are so easily rendered abnormal that the attempt to investigate them proves abortive; but the heart of *Batrachus* seemed so well suited for testing the action of drugs, etc., that a considerable number of experiments were made to ascertain their influence when directly applied to the heart. The drug was either applied in solution with a camel's hair pencil, or simply dropped over the heart; the fish meanwhile being kept under normal conditions (on its back, with sea-water bathing its gills, etc.) That the effect witnessed on the heart was not due to indirect influence through the extrinsic nervous system of the fish was shown by isolating the heart and treating it with the same drug or poison as the heart *in situ*. The results have always been harmonious.

It may be remarked at the outset that almost all the drugs and poisons used by me have had, as a first effect, the production of an increased rhythm, owing, probably, to the exciting effect of a foreign substance before the specific action had time to manifest itself. To this general rule the auricle proper has often proved an exception. I have constantly found that its beat is arrested with the greatest ease while the sinus extension remains comparatively unaffected.

It will be borne in mind that the heart of the fish consists of a sinus and sinus-extension (as in the tortoises, turtles, etc.), one auricle, and one ventricle.

PILOCARPIN AND ATROPIN.

The following extracts from my notes will give a general idea of the action of these drugs:

"At 2.30 P.M.—Fish prepared as usual. Pilocarpin Mur. in solution of 1 per cent. applied freely to heart, which has a rhythm of 30; vigor soon diminished, the beat lacking in decision; is a lazy heart; diastolic relaxation increased; heart more readily arrested; *e.g.*, wiping it over with a moistened sponge arrests heart for two minutes, which is much longer than the usual stop under such circumstances.

3.05.—Pilocarpin removed with a sponge, and Atropin applied; at once the rhythm, which had sunk, rose to 32; manifest increase of force in both auricle and ventricle; original decision of action restored."

The above notes are meant to be merely illustrative; space does not admit of all being given without undue distension of the paper.

Summary of the results of the action of Atropin and Pilocarpin.

1. Pilocarpin and atropin are antagonistic in action. The former is a cardiac depressor, tending to lower the excitability of the heart, render its action sluggish, and to stop it in diastole; the latter to improve a sluggish or weakened heart, and heighten the excitability of this organ under all circumstances. While pilocarpin tends to slow the rhythm, atropin quickens it, and increases the force of the beat. It manifests its action rapidly.

2. Atropin freely applied to the heart annihilates the possibility of arresting the heart reflexly.

Atropin applied to the conus arteriosus, arrested by a ligature between conus and ventricle, excites it to pulsation.

SODIUM AND POTASSIUM CARBONATE.

The following extract from my notes shows the opposing action of these two agents :

"Fish prepared as usual. 10.15 A.M.—Sod. Carb. in solution of 5 per cent. applied. Rhythm at once gets very rapid ; diastole of ventricle very short and imperfect ; auricle proper arrested.

10.25.—Auricle has recovered, and leads the rhythm of the ventricle.

10 30.—Pot. Carb. in solution of 5 per cent applied ; (1) Auricle at once arrested ; (2) Ventricular beat enfeebled. (This preceded by an increased rhythm.) Later, auricle begins and then again stops ; an independent rhythm of auricle and ventricle.

10.36.—Rhythm of auricle 40, but weak ; rhythm of ventricle 25, and also weak."

Sod. Carb. and Pot. Carb. were alternately applied in this case several times, always producing decidedly opposite effects.

Summary of the results of the action of Sodium Carbonate and Potassium Carbonate.

Sod. Carb. and Pot. Carb. are antagonistic in action on the fish's heart ; the former quickens rhythm and diminishes diastolic relaxation, and heightens cardiac excitability, but is in this respect inferior to Atropin. Potassium Carbonate diminishes excitability, weakens the heart's action, and tends to arrest it in diastole. This agent seems to be a poison to the fish's heart.

LACTIC ACID.

In 5 per cent. solution, this acid proves a speedy poison. Its effects in 1 per cent. solution will be clear from the following extract from my notes :

EXP.—R. 56. Lactic acid 1 per cent. freely applied.

Its effects :

(1) Slows rhythm.

(2) Auricle affected before ventricle.

(3) In ten minutes, whole heart arrested in well-marked diastole.

(4) The heart cannot be excited to action by mechanical means (prick with seeker). Neither Acetate of Strychnia in 1 per cent. solution, nor Digitalin applied in the usual manner, cause any improvement.

It is thus seen that lactic acid in 5 per cent. solution is a rapid poison, while in solution of 1 per cent. it depresses the heart and gradually kills it in diastole.

DIGITALIN, IN SOMEWHAT LESS THAN 1 PER CENT. SOLUTION.

Of all the drugs and poisons used, none has produced such decided manifest, rapid and constant action as digitalin. It was used in a solution of rather less than 1 per cent., and the results were precisely the same whether applied to the isolated heart or to the heart *in situ*, though, as is to be expected, much more rapid in the former case, on account of the better state of nutrition in the heart under normal conditions, enabling it to resist longer all kinds of foreign influences. This principle applies in all cases, so far as I have observed, of the action of cardiac drugs and poisons.

The action of digitalin may be stated thus :

1. Digitalin, when applied to a rapidly-beating heart, slows it.

2. *Its invariable action, no matter what the condition of the heart, is to produce gradually increasing systolic contraction, the diastolic relaxation getting less and less till the heart is finally arrested in most pronounced systolic tetanus.*

3. The peculiar action of the drug requires a short period before there is any decided manifestation of its effects ; but when the latter do appear, they rapidly advance to a maximum.

4. It is not possible to stimulate a heart brought to stand still by digitalin, to beat by mechanical means.

5. When the action is well pronounced, a large part of the time occupied in the systole of the ventricle is taken up in *maintaining* contraction when that is complete.

6. Digitalin neutralizes the action of various chemical agents which, when applied to the heart, tend to cause undue diastolic relaxation—(*e.g.*, Pot. Carb.)

7. A ventricle brought to stand still by digitalin is unusually small, hard and pale ("tonic" contraction).

NICOTIN IN 1 PER CENT. SOLUTION.

The effects of this agent I have found somewhat variable. A comparison of my different experiments will, I think, justify the following general statement :

1. The first effect of nicotin has generally been arrest of the

heart in diastole for a variable, but brief, interval; when actual arrest has not taken place, the beat has been much weakened and the rhythm slowed.

2. This condition is usually followed by irregularity and an increased rhythm, without much damage to the force of the beat.

3. The different parts of the heart may not act with their usual proportionate force or frequency. There may be two or more beats of the auricle for one of the ventricle, etc. (Incoördination.)

4. The fish's heart shows a remarkable power to recover entirely from the effects of nicotin.

VERATRIA IN RATHER LESS THAN 1 PER CENT. SOLUTION.

It is much more difficult to define the action of Veratria than that of Digitalin, though the *eye* readily appreciates differences. In general, the beat has that sluggish appearance seen after pilocarpin is used, but in other respects veratria is very unlike that drug in action. One of the most marked effects is the tendency to throw the parts of the heart and even parts of the ventricle out of harmony with each other, *e.g.*, the central portion of the ventricle is sometimes seen to be more relaxed than the rest of it; the auricle often, after the action has lasted some time, gives several beats to one of the ventricle. It is also clear that the diastole takes place in a very sluggish way, quite unnatural to the fish's heart.

The effect on the diastole is certainly much greater than on the systole. In some phases of this action, at least, the systole is strengthened. In consequence of this effect on the diastole, the rhythm is slowed. We may put the salient points of its action thus:

The principal action of veratria is on the diastole, which it renders more sluggish; the effect on the systole is slight, and possibly variable with the phase of action of the poison; as a consequence of its effect on the diastole, the rhythm is slowed. Want of harmony between the different parts of the heart and different fibres of the same part is liable to manifest itself.

CHLOROFORM (UNDILUTED.)

Attention is asked to the following extract from my notes, with a view of showing the action of this drug, and of pointing out how different is the behaviour of the auricle proper and the sinus-extension (connecting sinus proper and ventricle) :

Exp.—Four to five drops of chloroform applied to heart. Auricle stopped at once; ventricle continuing to act longer; latter gradually getting weaker, stops; later sinus-extension beating. A second application, especially to the sinus-extension and sinus, leads at once to a dead stop of the whole heart in diastole. Ventricle recovers first, and sets up by its rhythm a beat of the auricle (*i.e.*, after its own beat.)

Generally the whole heart recovers from the effects of the drug.

It is thus seen that undiluted chloroform is a powerful cardiac depressor ; that its readiest effect is on the auricle proper ; that it can arrest the heart in diastole, but that this organ has considerable ability to recover from the effects of this agent.

ACETATE OF STRYCHNIA IN 1 PER CENT. SOLUTION.

From a limited number of experiments with this poison, it appeared that it had the power to shorten the diastole and lengthen the systole, and slow the rhythm ; after arrest of the heart, it was still excitable by mechanical means.

It may be stated that in an area of the ventral wall of the ventricle, extending across it from the point of junction of the auricle, a behaviour, under the use of drugs, is witnessed different from that of the rest of this part of the heart. Sometimes it seems more dilated ; at all events, it appears to be more susceptible to the influence of certain drugs and poisons (nicotin, chloroform, etc.) than the rest of the ventricle, but whether there is here difference in structure has not been determined. On hearts so sensitive as those found in the sharks and skates, drugs and poisons act with remarkable celerity.

QUARTERLY RETROSPECT OF SURGERY.

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Surgery of the Kidney.—Since my last report on the above subject a year ago, much new matter that is valuable has appeared in the medical journals, and I feel that a short account of what has been recently done in this comparatively new surgical field will be interesting to readers. In the last Retrospect I devoted considerable space to the surgery of the intestines, in which department, also, much is being done. The surgery of the kidney and of the intestines has advanced side by side, the success in each division being made possible by the great impetus operative surgery in general has received from the improved methods of treating wounds by the introduction of antiseptics.

All surgeons now agree that in certain affections of the kidney, operative measures are necessary. There is still some discussion as to the best operation to perform in certain cases and the proper method of performing it. For example, whether in advanced suppurative diseases of the kidney we should perform simple nephrotomy with drainage or complete excision, or again, whether the ventral or lumbar incision is the better one. There are at the present time four operations which are well established in the treatment of surgical diseases of the kidney, viz. : Nephrotomy, or incision of the kidney ; nephro-lithotomy, or incising the kidney for removal of stone ; nephrectomy, or excision of kidney, and nephroraphy or fixation of a floating kidney.

Simple exploration of the kidney performed by means of a lumbar incision is a comparatively safe operation, and as a means of diagnosis is a most excellent procedure. Nephrotomy also is not exceedingly dangerous, but nephrectomy is still a very fatal operation, and von Bergmann (*Berlin Klin. Woch.*, November, 1885) remarks that the rate of mortality has not been much reduced during the last four years—for when Czerny published statistics of 72 nephrectomies performed up to 1881, the mortality was 44·4 per cent. In Gross' statistics of 233

nephrectomies performed up to 1885, the mortality still remains at 44·6 p. c. Of course many of these cases were not proper ones for operation. Von Bergmann hopes that with improved methods of diagnosis and a better method of operating, the mortality in future will not be so great as in the past. For tumors of the kidney, nephrectomy is especially fatal. In certain cases of advanced suppurative disease of the kidneys, nephrectomy is not advisable unless the condition of the other kidney can be positively ascertained to be healthy; if this cannot be done, then nephrotomy only should be performed. According to Billroth and Fischer, suppuration of kidney is generally double, and when single this fact cannot certainly be ascertained. Both Billroth and Fischer are opposed to nephrectomy in suppurative disease. Von Bergmann, however, holds that in many cases the suppurative disease is one-sided, and can be ascertained to be so by the appearance of a tumor in one or other lumbar region, by the character and situation of pain, etc. Besides, the condition of the other kidney may occasionally be recognized to be healthy by bimanual palpation. The most valuable recent contribution to the Surgery of the Kidney is one by Prof. S. W. Gross of Philadelphia, published last July in the *American Journal of the Medical Sciences*. In this article he shows very plainly that the lumbar incision is the safest method of operating. He has collected from various sources 233 cases of extirpation of the kidney; of these 129 recovered and 104 (44·63 p. c.) died. One hundred and eleven of these operations were performed by the lumbar incision, with 70 recoveries and 41 deaths (36·93 p.c.); 120 by abdominal incision, with 59 recoveries and 61 deaths (50.83 p. c). The chief causes of death were, in the abdominal operation, peritonitis, pulmonary embolism, primary hemorrhage, and uræmia; after the lumbar operation, shock, exhaustion, septicæmia, pyæmia, anuria, secondary hemorrhage, vomiting. Primary hemorrhage rarely occurs in the lumbar operation, but is the cause of six-tenths of the deaths in the abdominal operation.

Prof. Gross thinks that nephrectomy is often performed unnecessarily, and that a better result with less risk to the patient might be obtained by one of the less formidable operations.

The following are his conclusions from a study of 450 cases of different operations in the kidneys :—

(1) Lumbar nephrectomy is a safer operation than abdominal nephrectomy.

(2) Primary extirpation of the kidney is indicated (*a*) in sarcoma of adult subjects, (*b*) in benign neoplasms at any age, (*c*) in the early stage of tubercular disease, (*d*) in rupture of the ureter, and (*e*) in uretal fistula.

(3) Nephrectomy should not be resorted to till after the failure of other measures : (*a*) in subcutaneous laceration of the kidney, (*b*) in protrusion of the kidney through a wound in the loin, (*c*) in recent wounds of the kidney or of the ureter, (*d*) in suppurative lesions, (*e*) in hydro-nephrosis and cysts, (*f*) in calculus of an otherwise healthy kidney, (*g*) and painful floating kidney.

(4) Nephrectomy is absolutely contra-indicated in (*a*) sarcoma of children, (*b*) in carcinoma at any age unless disease can be diagnosed at a very early age, (*c*) in advanced period of tubercular disease.

In the paper on "*Extirpation of the Kidney*," by von Bergmann, already referred to (*Berlin Klin. Woch.*, Nos. 46, 47, 48, Nov. 1885), the lumbar method of operating is strongly recommended. Von Bergmann has operated three times for tumor of the kidney—two by the abdominal incision and one by the lumbar. The two cases operated on by the ventral incision died ; the one by lumbar incision recovered. When the lumbar incision is practised, the danger of peritonitis is avoided. Von Bergmann has excised the kidney five times for suppurative disease, with one death. In all five cases the suppuration was one-sided, there being in each case a tumor developed in the lumbar region of the affected side. In two of the cases the suppurative condition followed pregnancy. One of these died, but her condition before operation was far from good. She had high fever, rapid pulse, and was much emaciated. She died of shock four hours after the operation. The removed kidney was converted into two large pus sacs, and in the ureter an almond-shaped stone was found. In the two next cases the cause of the suppuration could not be ascertained. In both,

the suppuration was diagnosed as one-sided. On pressure upon the lumbar tumor, there was an increase of pus in the urine. In the second case the kidney was not immediately removed, but an incision was first made into the abscess, and three months later nephrectomy performed, because the patient was gradually sinking from exhaustion due to the discharge of pus. The fifth case was one of huge abscess of right kidney in a man aged 52. The abscess was first punctured with a Dieulafoy's aspirator and eight liters of pus evacuated. This relieved the great difficulty of breathing which had previously existed. In this case also, by pressure on the tumor, the amount of pus in the urine was markedly increased. The patient not improving, and pain and swelling again returning, the kidney was cut down upon by the usual oblique lumbar incision from the outer edge of the sacro-lumbalis and eleventh rib to the anterior superior spine of the ilium. The abscess was opened and the enormously dilated kidney removed, the vessels being ligatured with catgut. The wound was sewed up in part only, a great portion being stuffed with iodoform tampons. Little blood was lost, but the patient at end of operation was almost pulseless. However, the case did well, there was no after-fever, and he was able to leave his bed in four weeks. In these cases von Bergmann states that incision of the kidney substance is usually bloodless, as the parts are so altered and anæmic that no danger results; besides, the evacuation of the pus and reduction of the size of the tumor greatly facilitates the removal of the kidney. A preliminary incision is useful in cases where it is not known if the other kidney is healthy, and does not interfere with a subsequent extirpation. According to Gross (Loc. cit.), of 93 nephrotomies, 23 died (22·1 p. c.), 21 recovered with a fistula, and of 12 cases where nephrectomy was performed subsequently, only one died. To show the difficulties of diagnosis, von Bergmann relates a case of fistula in right lumbar region with swelling, where he, in June 1885, cut down and evacuated a large amount of pus and then enucleated the kidney; he found it shrunken and uneven, but no abscess in connection with it. He had mistaken a perirenal abscess for a renal one. The patient died in a day or

two of anuria, and at the autopsy the other kidney was found to be in a similar condition to the one removed.

In the after treatment of the wound left in nephrectomy, the author strongly advocates stuffing it with iodoform gauze for 24 hours, a procedure which lessens the risk of septic infection and does not prevent primary union. In doubtful cases (for example, where a cystic kidney might be mistaken for an ovarian cyst), to clear up the diagnosis, von Bergmann advocates inflating the bowel. If the tumor is ovarian, of course no tympanitic note will be produced over it, but if a kidney tumor, the inflated bowel will partly cover it and give a tympanitic note. The author also describes a case in which he operated for hydronephrosis with complete recovery in four weeks. In performing nephrectomy or nephrotomy, the writer advocates placing a thick roll under the sound side to facilitate manipulation. In conclusion, he remarks that the oftener and earlier nephrectomy and nephrotomy are performed for suppurative diseases of the kidney, so many more cases will recover.

A writer in *L'Union Medicale de Reims* (Oct. 15, 1885), commenting on Prof. S. W. Gross' paper, adds twelve more cases of nephrectomy lately performed, principally in France, with only one death. These operations were performed by von Horoch, Polaillon, Lucas-Championnière, Ollier, Le Dentu, Trelat, Spiegelberg and others. The fatal case was one of Ollier's, operated on for tuberculous disease of the kidney. The writer also mentions a method of operating without wounding the peritoneum, advised by some French surgeons—viz., making an incision external to the edge of the rectus abdominis and peeling off the peritoneum from the abdominal wall to reach the kidney. This might do in some cases, but where there was extensive suppurative disease of the kidney would be a difficult procedure in all cases, and impossible in many.

At a meeting of the Surgical Society of Paris, held Nov. 18, 1885, M. Polaillon reported a successful case of nephrectomy of the left kidney for calculous pyelitis. An L-shaped incision was made in the lumbar region, and after the skin incision all the tissues were severed by the thermo-cautery. The patient made a good recovery. In the discussion which followed, M. Le Dentu

condemned the use of the thermo-cautery and also advised that the lumbar incision should be made as far forwards as possible.

In an article in the *Birmingham Medical Review* for Sept., 1885, Mr. Lawson Tait describes nine cases in which he had performed operations on the kidney during the year 1884. The first case was a *nephrectomy* of the right kidney for obstructed ureter in a female aged 32; perfect recovery. Case 2, female aged 19—Nephrectomy for persistent fistula following ruptured kidney cyst; recovery. Case 3, female, aged 45—Nephrectomy for supposed solid tumor of kidney; death from shock 26 hours after operation. Mr. Tait regrets not having made an exploratory incision into this tumor before attempting its removal, as it was found to really consist of a series of abscesses. Case 4, female, aged 38—Nephrotomy and drainage for relief of abscesses; temporary improvement. Case 5, female, aged 22—Nephrectomy; moveable right kidney, which was supposed to be a morbid growth of ovary or tube; abdominal section; kidney large and removed; left kidney healthy; recovery. Case 6, female, aged 25—Nephro-lithotomy; large-branched calculus removed from right kidney; rapid recovery. Case 7, female, aged 52—Nephro-lithotomy; large calculus removed from pelvis of right kidney; rapid recovery. Case 8—Supposed cyst of mesentery; abdominal section; found to be a cyst of right kidney; nephrectomy; perfect recovery. Case 9, female, aged 59—Nephrotomy of right kidney, with removal of large kidney from its pelvis; rapid recovery. Mr. Tait remarks that these cases complete a series of 40 operations on the kidney. These operations have been performed for abscesses, hydatids, sarcoma and calculi. Thirty-eight complete cures have resulted, and, strange to say, with two exceptions, all the operations have been on the right kidney. Mr. Tait says that his experience gained in operating on the kidney has taught him that, before removing a kidney, it should always be first incised to ascertain its condition exactly. He does not think it matters much whether the lumbar or abdominal incision is made use of, but he strongly prefers the abdominal incision if the kidney is to be removed, on account of the facility with which the condition of the other kidney can be ascertained before proceeding with the operation.

For simple nephrotomy, he prefers the lumbar incision. He condemns the attempt at removal of malignant tumors in children under 15.

Demonstration of Extirpated Kidneys.—At the late German Surgical Congress, Baron Horoch (Vienna) exhibited a malignant tumor of the kidney removed by Prof. Albert from a woman aged 40, by lumbar operation; although the peritoneum was torn, patient was discharged completely cured in four weeks.

Dr. Claus exhibited a fibroma of the kidney, to which was attached a large cyst, whose wall was the distended kidney capsule. It was of large size, and diagnosed as a monolocular ovarian tumor. Removed by abdominal section. Patient left hospital in four weeks.

In the discussion which followed, Prof. König stated that he had recently removed the kidney in two cases in children. Both operations were by abdominal section; one was for myo-sarcoma. Both operations were easy and successful. Schönborn said that he had successfully removed an adenoma of the kidney in a child; no recurrence at end of four weeks.—(*Central. f. Chir.*, 1885, No. 24; quoted in *Annals of Surgery*, Nov. 1885.)

Nephrectomy for Sarcoma.—In the *Medical Press and Circular* for March, 1885, Mr. R. N. Pugh reports a fatal case of nephrectomy in a child aged 2 years and 4 months, who was admitted into the Children's Infirmary, Liverpool, for a tumor of left side of abdomen. Abdominal section performed, and left kidney removed. Vomiting came on two days after operation, and death occurred on the twenty-third day. Post-mortem showed the cause of death to be strangulation of a portion of small intestine which had protruded through a rent in the peritoneum behind the colon.

Nephrectomy.—Mr. Knowsley Thornton (*Med. Times and Gazette*, March 14th, '85) reports a case of abdominal nephrectomy performed in a woman, aged 32, for calculous pyelitis of right kidney. Wound soundly healed on fourteenth day.

Dr. C. K. Briddon reported to the New York Surgical Society (*Medical News*, Jan. 30, '86) a case of nephrectomy for calculous pyelitis of right kidney in a woman aged 36. The lumbar

incision was first made and kidney exposed; as it felt solid and non-fluctuating, and it was of such size that the hilus could not be reached, removal by abdominal incision was immediately resolved upon. On separating the kidney, an abscess cavity was torn open and about 8 ozs. of pus escaped into peritoneal cavity. The kidney was removed without great difficulty, but the woman died within a week of septicæmia. The removed kidney was much disorganized, and contained a large calculus in the pelvis.

Dr. Briddon, in this case, evidently committed a great error in not first incising the kidney before resorting to abdominal incision; had he done so, he would have evacuated the contained pus, removed the kidney by the lumbar incision, and probably have saved his patient; or, if he was doubtful about the condition of the other kidney. he could have performed a preliminary nephrotomy.

Dr. Lange (*Medical News*, Jan. 16th, '86) reports a case of nephrectomy for a pyonephrotic kidney. The patient was a woman aged 26, who frequently had bloody urine, and always severe pain; case thought to be one of stone. Under chloroform, both kidneys could be distinctly made out to be of apparently normal size. Kidney cut down upon, and by lumbar incision was found cystic and the ureter and pelvis almost obliterated. Patient made a rapid recovery, and was relieved by the operation, but the author thinks there is probable disease of the other kidney, and that the outlook is not hopeful.

Colquhoun (*Lancet*, June 12th, '85, p. 1081) reports a successful case of left nephrectomy in a man aged 44, for calculous pyelitis. Patient had suffered from symptoms of stone for 16 years. The operation was performed in the Dunedin Hospital, New Zealand.

I might add to the foregoing cases of nephrectomy two additional ones, reported at a recent meeting of the Montreal Medico-Chirurgical Society; both successful. One was performed by Dr. W. H. Hingston for distended and painful left kidney, with obliteration of the ureter, in a girl aged 18: the other performed by myself in a woman aged 24, for advanced calculus pyelitis of the left kidney. The latter case is reported in the *New York Medical Record* for December 12, 1885.

Renal Lithotomy.—In the *British Medical Journal* of September 5th, 1885, Mr. R. H. Bourchier Nicholson reports a successful case of nephro-lithotomy in a woman aged 42, who had suffered severe pain and had been passing pus for two years. A tumor about the size of an orange could be felt on left loin. It was cut down, and on incising kidney a considerable quantity of pus escaped. In introducing his finger into the incision a large branched calculus was found, and removed several smaller ones. The woman made good recovery.

Calculi removed from Kidney by combined Abdominal and Lumbar Sections.—Mr. Knowsley Thornton (*Med. Times and Gazette*, July 4th, 1885,) reports the case of a woman, aged 25, who suffered from symptoms of renal calculus. Abdominal section by Langenbuch's incision (outer side of rectus). Introduced hand into abdomen; no stone felt in left kidney; the right examined, and stone made out by pushing finger through peritoneum. Then a director was pushed through the loin till it reached the skin. Here it was cut down upon from without and the incision enlarged with a bistoury. A director was then passed through the wound in loin from without, till it reached the stone, and the stone was then cut down upon through the pelvis of the kidney and extracted. A drainage tube was passed through the loin into the pelvis of the kidney, the peritoneum sponged out and abdominal wound closed. Fifteen months later, patient was again admitted into hospital suffering from symptoms which led to the supposition of the presence of calculus in left kidney. An abdominal incision was made, the hand introduced, and no stone found—so the right kidney was examined and a stone at once detected in the pelvis. It was removed by the combined operation as before, and another stone was found and extracted from one of the calyces. The patient recovered.

(It seems to me that if Mr. Thornton had performed the lumbar operation in the first instance he would have discovered all the calculi, and would have relieved his patient by a simple operation instead of by two very complicated ones.)

Nephrotomy and Nephro-Lithotomy.—Mr. Bennett May (*Brit. Med. Jour.*, Oct. 31, p. 837,) reports three cases of

the above. Case 1, youth aged 20—Symptoms of calculi well marked, and lasted 14 years; lumbar incision and removal of calculi; free hemorrhage stopped by plugging; subsequent perinephric suppuration; death in three weeks from pyæmia. Case 2, male aged 35—Symptoms of stone for 10 years; stone detected by acupuncture; lumbar incision and removal of large stone; rapid recovery. Case 3, female aged 23—Symptoms of renal calculus well marked for 18 months; had passed a calculus per urethram. Incision made, but failed to find stone; rapid recovery, with relief of symptoms.

At a meeting of the London Clinical Society, held February 27th, 1885 (*Lancet*, March 7th, 1885), Mr. Henry Morris reported a successful case of nephro-lithotomy, in which a calculus was removed from the left kidney. Had suffered from pains in the loins ever since boyhood, but during the last two years pains had increased, so as to prevent his working. At the same meeting, Mr. Charles J. Symonds reported a case of nephro-lithotomy in a man aged 50, who had suffered 24 years from renal colic. Stone removed from the left kidney; good recovery.

Nephro-Lithotomy after Nephrectomy.—Mr. Clement Lucas operated on a unique case in Guy's Hospital on October 29th, 1885. A woman upon whom he had performed nephrectomy about four months before, for complete destruction of the right kidney by large calculi and hydronephrosis, and who had made a rapid and perfect recovery, was suddenly seized with great pain in the region of the other kidney, followed by vomiting, headache, and suppression of urine. The symptoms commenced early Sunday morning, October 25th, from which time no urine had been voided. She was removed to hospital on Wednesday, October 27th, and treated with diuretics for 24 hours. This having no effect and the symptoms being very serious, Mr. Lucas cut down on the remaining kidney and removed a conical calculus. Total suppression of urine had lasted 102 hours. Free drainage of urine immediately took place from the wound, and vomiting and headache at once ceased. The patient had perfectly recovered when last heard from—January 1886.

Treatment of Kidneys in an advanced stage of Suppuration by Drainage.—Mr. W. Bruce Clarke (*Lancet*, November 7th, 1885,) says that in many cases of suppurative disease it is absolutely impossible to remove the kidney with safety, owing to the number of adhesions by dense cicatricial tissue to surrounding organs and bloodvessels. He relates a case in a woman aged 42, with a sinus near the apex of the last rib leading down to a suppurating kidney. Stone being suspected as the cause, the sinus was explored and found to pass upwards between the liver and the ribs for some six inches ; the patient becoming very faint, the operation was suspended. The woman died of peritonitis five days after the exploration of the sinus. At the post-mortem, it was found that some thin peritoneal adhesions had been broken down, and this had given rise to peritonitis, which caused her death. The kidney itself was surrounded by a large amount of thickened tissue, and firmly attached to the neighboring organs and tissues. A calculus was found in the kidney. Mr. Clarke thinks it would have been impossible to remove the kidney during life. In such cases as these, Mr. Bruce Clarke advises that the procedure advocated by Mr. Clement Lucas some years ago should be adopted—viz., incision and drainage of the suppurating kidney. He draws attention to 13 cases of attempted nephrectomy, within the last few years, for suppurative disease of the kidney. In two, the operation of nephrectomy was abandoned, and nephrotomy employed with success ; in the remaining eleven, only two recovered.

The author goes on to say that when a kidney has already been subjected to nephrotomy and drained, the condition of the two organs can be easily ascertained ; and if the healthy kidney be sufficient for the wants of the individual, and the diseased one little more than a suppurating sac, obliteration of the abscess cavity is indicated, either by scraping and irrigation or removal of the whole kidney. Which is the better method, he leaves to be decided by future investigation. After the kidney has been incised and drained, its subsequent removal can be effected with less danger to life than if a primary nephrectomy had been attempted.

Mr. Clement Lucas, in a letter commenting on this paper (*Lancet*, Nov. 28th, '85), says a little bolder surgery might have led to a more successful termination in Mr. Bruce Clark's case. He says why probe the sinus at all; why not cut directly down on the kidney at once. He does not believe that there are kidneys which cannot be removed; however adherent, it is always possible to remove the kidney from within its capsule, for the soft tissue breaks away from the fibrous covering, though bands here and there may need to be divided. He thinks it is always possible to remove the kidney, but not always proper, without first trying the effect of drainage.

Correspondence.

NEW YORK, Feb. 16, 1886.

Considerable excitement prevails here among the laity regarding hydrophobia. The daily press loses no opportunity for painting, with harrowing and ghastly details, the symptoms of all the cases that have been supposed to have died from that disease. Each morning the *Herald* has columns of closely printed matter headed, "Hydrophobia: its Torments, Dangers, &c." The opinions of doctors, celebrated and otherwise, are published in its columns from day to day, and, as these vary considerably, the affrighted public do not know what to believe. The topic of conversation in the drawing-room now is hydrophobia, &c. Woe betide the poor medico if he forms one of the party. He is quizzed beyond all power of endurance. Should he be so indiscreet as to express an opinion, he is literally crushed by the weight of facts, freshly coined in the columns of the *Herald*, which are brought up against him. If an epidemic of nervous or hysterical hydrophobia do not occur in the near future, it will be from no lack of exciting causes. Even Pasteur, though he be beyond the Atlantic, comes in for a fair share of the annoyance the press is creating and keeping up. He has received letters from every corner of the Universe asking him all sorts of questions, and making him the most liberal offers if he would come to the States and start a "canine institution" or exhibit himself for a week at a Dime

Museum. One correspondent wished to know how much Pasteur would charge to have his "dorg syringed."

At the last regular stated meeting of the Academy of Medicine, a somewhat novel method of treating ascites was proposed. Dr. Caillé read a paper on "the Permanent Drainage of the Abdomen in Ascites." The paper embodied the report of two cases in which the author had adopted that method. A trocar was made to pass through the abdominal wall into the peritoneal cavity, and a rubber tube introduced through the canula, which afterwards was withdrawn. The tube was kept *in situ* by means of a rubber bandage. The wound was dressed with iodoform and vaseline, but it was found that a troublesome eczema developed. On using simple tallow this was prevented on a subsequent occasion. The reader of the paper, in closing the discussion, remarked that, doubtless, several improvements might be added in the future; for instance, the tube might be connected with a rubber bag, which the patient could carry sustained up in his pants, or the tube of rubber might be replaced by one of silver, provided with a stop-cock, and the fluid drawn off at will. The latter "suggestion" recalls the wondrous feats that struck the imagination in boyhood. These were performed in small, mysterious booths, and the one most vividly remembered is the tapping of an individual, and any desired wine or liquor would flow in abundance. The choice, however, in this case, would require to be limited, as I believe only whiskey, gin and brandy go to the make-up of cirrhosis and the resulting ascites.

In the discussion that followed, the President, Dr. A. Jacobi, made several instructive remarks. He said that Dr. Caillé's proposal of permanent drainage in ascites was simply following what nature does in some cases. He had seen not a few cases of severe ascites in which the fluid had formed a fistulous opening for itself, and was thus drained off. This opening often occurred at an unfavorable site, and it would certainly be better that the surgeon should make the opening himself at a selected point. He had followed this plan in a few cases recently, and was well pleased with it. On the question of the curability of cirrhosis, Dr. Jacobi said that he had changed his views regard-

ing mercury within the past few years. Prior to that he held that mercury was an anti-plastic agent and injurious to the system, but formed the only true antidote to syphilis, and hence had to be given in that disease. Now, however, he considered mercury a very valuable remedy in all cases of interstitial inflammations, in cirrhosis, myelitis, cerebritis, etc. He feels confident that cirrhosis of the liver can be arrested by small and long continued doses of corrosive sublimate. An arrest of the progress of the disease is equal to a cure, for an organ can discharge its functions well though a portion of it is destroyed by interstitial growth of connective tissue.

The Academy of Medicine and the County Medical Society of New York have conjointly drafted a set of resolutions to be presented before the State Legislature for the purpose of protecting the children in public institutions from the various infectious diseases. The resolutions provide that every incorporated institution for the care of children shall have attached to it a regular physician who shall carefully examine all children applying for admission and give a certificate stating whether the applicant is suffering from any infectious or contagious disease, especially of the skin or eyes. Any such child shall not be allowed to enter the institution, but shall be confined in a dormitory until it will have recovered from the affection. They also provide that the attending physician must give notice in writing, to the proper authorities, whenever any dormitory shall be overcrowded, so that there shall be not less than 600 cubic feet to each individual. The New York State Society, at its annual meeting on the 2nd inst., has endorsed the bill with the view of aiding its introduction into the Legislature.

Some startling facts were revealed by a committee appointed during the winter, by the Academy of Medicine, to investigate the condition of children in public institutions. The committee found 39 children in the "New York Institution for the Blind," who have been sent there during the past few years from some of New York's best known and most generously supported asylums. This report shows in unmistakeable terms that these children lost their sight through neglect of the simplest rules of hygiene and health on the part of those who should have cared for them.

This city has lost one of its oldest and most respected surgeons by the recent death of Dr. Alfred C. Post. The deceased was born in New York in the year 1805, and was graduated at the College of Physicians and Surgeons in 1827. After a couple of years abroad, Dr. Post returned to this city, where he had been in constant active practice until a few weeks before his death. As early as 1836 he was made one of the attending surgeons at the New York Hospital. He was one of the founders of the medical department of the University of the City of New York, taking the chair of Surgery and Pathological Anatomy, and at the time of his death was President of the Medical Faculty and Emeritus Professor of Clinical Surgery in that institution. His connection with the New York Hospital extended over a period of 51 years, and was to have been made, by the Board of Managers of that institution, the occasion of a jubilee the coming spring. Dr. Post was characterized for his cultured and refined tastes, his upright principles, and his strong religious convictions. The two things, it is said, which he enjoyed the most was a surgical operation and a prayer meeting. It is refreshing to learn of an eminent practitioner, in this vortex of passion and worldly strife, go through a long life with a steady, honest purpose, and with a firm belief in his maker and His laws.

Prof. A. Flint has tendered his resignation to the Academy of Medicine, and it has been accepted. This is one of the late fruits of that vexatious code question. H. N. V.

Reviews and Notices of Books.

Puerperal Convalescence and the Diseases of the Puerperal Period.—By Joseph Kucher, M.D. New York: J. H. Vail & Co.

The author, having enjoyed exceptional opportunities for the observation of puerperal cases in the enormous lying-in hospitals of Vienna, and subsequently in private practice, presents this monograph as embodying his views upon these important ailments. We have carefully examined several of the chapters, and find in them clear and decided statements as to etiology and treatment which commend themselves to our judgment, and are

in consonance with the present teachings of the most advanced pathologists. In no department of medicine is it so necessary to keep up a constant stream of reliable writing in order that the old well-entrenched, but now exploded, superstitions may be utterly destroyed. The contribution of our author tends all in this direction—take, *e.g.*, Mastitis. How many still use the old-fashioned frictions, massage, frequent nursings, &c., overlooking the undoubted fact that phlegmonous inflammation of the breast always arises from an *infected* abrasion or fissure. Dr. K. gives minute directions for the prophylaxis of mastitis by preventing infection of an existing fissure. Asepsis (and antisepsis) is, of course, dwelt upon at some length, and we commend these facts to the profession. Eclampsia receives considerable attention. He adopts the view that pressure may play a part in the production of this trouble, but that, if so, it is chiefly from interference with the ureters, damming back the urine upon the renal calyces. Pilocarpine is condemned owing to the dangers from bronchial secretion. "It is very doubtful," he says, "whether venesection ever has any beneficial effect, notwithstanding the many reports in its favor, and it is very often dangerous, as has been observed by Schröder and others. I have never seen an indication for blood-letting, and it has been completely discarded in the Vienna clinics, where the results of treatment are far better than anywhere else." We look, however, in vain for suggestions concerning the treatment of the milder uræmic symptoms with a view to prevent eclampsia. The book is really a practical and original one, and well repays perusal. Every physician in charge of lying-in cases will derive much reliable information and many valuable hints from this unassuming but none the less solid little book.

The Wasting Diseases of Infants and Children.—By Eustace Smith, M.D., Lond. Fourth edition. New York: Wm. Wood & Co.

This standard work of reference is now added to Wood's Library, and in its present complete form, and with the more recent additions, is a most valuable treatise upon affections which form such a large proportion of all the chronic disorders of

children. The earlier editions are so well known to the profession that it is, perhaps, sufficient merely to note the appearance of this later one. But for the benefit of any who may not know the scope of the treatise, we might say that it is of an eminently practical character. and that the nature of the contents can be readily extracted from the enumeration of the headings of the heading of the chapters:—I. Simple Atrophy from insufficient nourishment. II. Chronic Diarrhœa (chronic intestinal catarrh). III. Chronic Vomiting (chronic gastric catarrh). IV. Rickets. V. Inherited Syphilis. VI. Mucous Disease. VII. Worms. VIII and IX. Chronic Pulmonary Phthisis. X. Caseation of Lymphatic and of Mesenteric Glands. XI. Diet of children in health and in disease.

Psychiatry: A Clinical Treatise on Diseases of the Fore-Brain, based upon a Study of its Structure, Functions and Nutrition. By Theoder Meynert, M.D., Professor of Nervous Diseases and Chief of the Psychiatric Clinic in Vienna. Translated (under authority of the author) by B. Sachs, M.D., Instructor of Diseases of the Mind and Nervous System in the New York Polyclinic. Part I. The Anatomy, Physiology and Chemistry of the Brain. New York and London: G. P. Putnam's Sons. 1885.

This work, which has been in preparation for many years by Prof. Meynert, is one of the most important additions that neurological and psychiatrical literature has received during the past decade. It is intended to be essentially a clinical treatise on "Diseases of the Fore-Brain." As the translator says, "it is a scientific treatise on diseases of the mind by the one best fitted to write such a treatise." Prof. Meynert has been director of the observation wards in the Vienna General Hospital since 1875. Here he has had unequalled opportunities of becoming acquainted with the different forms of disease of the fore-brain, as he had yearly from 1400 to 1600 patients under his care. Any one who will peruse this work will be fully convinced that the distinguished author has made good use of his opportunities. The first part of this volume deals with the anatomy of the brain—"the structure and architecture of the brain." It is

impossible in the space at our disposal to give even an idea of the way in which this subject is treated by the author. It requires to be closely studied in order to be fully comprehended. There is a considerable difference in the author's views of the origin and distribution of the spinal cord tract from those commonly taught. The physiology of the fore-brain is elaborately discussed, as well as its nutrition. The volume concludes with a very learned chapter on the "Mechanism of Expression." Considering the very great difficulty of the translator's task, he has performed it extremely well. The members of the profession on this continent and in England who are unable to read the original, owe Dr. Sach a debt for giving them an opportunity of becoming thoroughly acquainted with the views of one of the most distinguished physicians of the present day.

The second volume, which will be shortly issued, will be devoted to the purely clinical features of the diseases of the fore-brain.

A Manual of Animal Vaccination.—By Dr. E. Warlomont, Member of the Royal Academy of Belgium, &c. Translated by Arthur J. Harries, M.D., Senior Assist. Physician and Joint Lecturer to St. John's Hospital for Diseases of the Skin, &c. London: J. & A. Churchill.

The subject of vaccination, as regards its history, arguments in its favor, and the technique of the operation, is one to which, perhaps, sufficient attention has not been given in the teaching-schools of this country. At the same time, in view of the occasional occurrence of smallpox in various localities, it is one with which every educated physician should be thoroughly conversant. Dr. Warlomont is the founder of the National Vaccine Institute of Belgium, and is a recognized authority upon all questions relating to vaccine and vaccination, both in Europe and in America. It is to be hoped that this manual, emanating from such a reliable source, will be widely circulated in Canada. It is a small and inexpensive book, and yet contains all essential information on the modes of propagation and collection of vaccine, the various methods of vaccination, the vaccine eruption, and its various peculiarities and associated rashes. There is appended

a list of the chief works published on vaccination which will be very useful to any one desiring to study the subject more at length.

The Science and Art of Midwifery.—By Wm. Thompson Lusk, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in the Bellevue Hospital Medical College. New edition, revised and enlarged. With numerous illustrations. New York: D. Appleton & Co.

It is but a short time since we had occasion to review this work, of which we were enabled to speak in high terms of praise. The rapid advance of many departments of obstetrics has meantime called for a few additions. These having been made, it can be confidently said that Lusk's Midwifery holds a high place amongst American authors, and deserves to be extensively employed for reference and recommended to students as a reliable and unusually readable text-book.

Rationalism in Medical Treatment, or the Restoration of Chemism: the System of the Future.—By William Thornton. Boston: Published by the Author, 1885.

As a publisher William Thornton is a great success, but as an author he is an utter failure. He has published a work of 46 pages, the mechanical execution of which we never saw excelled. He has written, however, 46 pages of the most arrant nonsense we ever read.

Books and Pamphlets Received.

Local Anæsthesia in General Medicine and Surgery: Being the practical application of the author's recent discoveries. By J. Leonard Corning, M.D. New York, D. Appleton & Co.

How we Treat Wounds To-day. By Robert T. Morris, M.D. New York and London, G. P. Putnam's Sons.

Fractures and Dislocations.—By T. Pickering Pick, F.R.C.S. Philadelphia, Lea Brothers & Co.

Practical Human Anatomy. A working guide for Students of Medicine and Physicians. By Faneuil D. Weisse, M.D. New York, Wm. Wood & Co.

Rome in Winter and the Tuscan Hills in Summer. A contribution to the Climate of Italy. By David Young, M.A., M.D, &c. London, H. K. Lewis.

A Doctor's Experiences in Three Continents. By Edward Warren, M.D. Baltimore, Md., Cushings & Bailey.

The Diagnosis and Treatment of Diseases of the Ear. By Ozea D. Pomeroy, M.D. Second edition. New York, D. Appleton & Co.

Essentials of the Physical Diagnosis of Thoracic Diseases. By E. Darwin Hudson, Jr., A.M., M.D. New York, Styles & Carb.

Handbook of the Diseases of the Nervous System. By Jas. Ross, M.D., LL.D. Philadelphia, Lea Brothers & Co.

A Manual of Operative Surgery. By Lewis A. Stimson, B.A., M.D. Second edition. Philadelphia, Lea Brothers & Co.

A Manual of Auscultation and Percussion. Embracing the Physical Diagnosis of the Lungs and Heart, and of Thoracic Aneurism. By Austin Flint, M.D., LL.D. Fourth edition. Philadelphia, Lea Brothers & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, Dec. 18, 1885.

T. G. Roddick, M.D., President, in the Chair.

Unusually good convalescence after Ovariotomy—Dr. Trenholme related the history of the last two cases operated upon for ovarian dropsy. In one case the temperature reached 101⅜° ten hours after the operation, but the next morning it was normal. The following afternoon (26 hours after operation) it was 99°, but in the evening it was normal, and remained so afterward. After the first day the pulse also was normal. There were no signs of shock or after-suffering of a severe character. The tumor weighed 34 lbs., and the patient was convalescent after the 18th day. In fact, manifestly gained in flesh before the end of the first week. The second case was even more remarkable, as the tumor weighed 55 lbs. The temperature reached 100° ten hours after the operation, the next morning it was normal, and, together with the pulse, remained normal afterward. The patient was up for her meals the 11th day, and going about the house after the 14th. There were no symptoms of shock, no suffering, and not even a sign of tympanitis. The remarkable results obtained in these cases were due, Dr. T. believed, to the smallness of the abdominal incision. In neither case was it more than three inches in length, and in neither case were the intestines exposed to the air—in fact, in one case not even seen. The second point was the mode of securing the pedicle ; as in all his operations, Dr. T. employed No. 20 shoemaker's white thread, and ligated the pedicle in small segments. The high temperature of the room, the atmosphere being saturated with vapor of water slightly impregnated with carbolic acid, was believed to have contributed to these favorable results.

Dr. Smith read a lengthy paper on "*The A. C. E. Mixture the best Anæsthetic in Obstetrical Practice.*" The conclusions arrived at were as follows: —1st, A. C. E. is an effective general anæsthetic, producing as deep insensibility as chloroform. 2nd, Its action is rather more rapid than chloroform, but to develop its effects more of it is required, the proportion being about as 6 is to 4. 3rd, It produces a less prolonged second degree of narcotism than other anæsthetics. 4th, When its effects are fully developed, the narcotism is very prolonged, and is reproduced with great ease. 5th, Its influence on the nervous centres is more uniform, and it creates little, if any, disturbance or break of action between the respiratory and circulatory functions. 6th, The final escape from the organism is rapid, so that the symptoms of recovery are sudden. 7th, In some cases, but very rarely, it produces vomiting. 8th, When it kills, it destroys by equally paralyzing the respiratory and circulatory mechanism.

Dr. Kennedy had not seen the A. C. E. mixture used often, and in these few cases he was not favorably impressed towards it. He thought it would evaporate irregularly, the ether being more volatile, would go off first, and leave the chloroform and alcohol behind. He liked chloroform for midwifery practice and ether for surgical cases.

Dr. Hy. Howard said he had used chloroform upon himself continuously for 48 hours for a severe attack of renal colic. He had also taken ether. He had no fear of either of them.

Dr. Stewart had never used the A. C. E. mixture, and believed the little alcohol in it could have no value as a stimulus. Bichloride of Methyline had caused a good many deaths in the past ten years. The danger with chloroform did not arise from large doses. Statistics prove that often a small quantity has produced fatal results.

Drs. McConnell, Mignault, Armstrong and Trenholme were well satisfied with chloroform for obstetrics and ether in most other cases.

Dr. Browne said he had never seen post-partum hemorrhage follow the use of choloroform. He gave a few drops on a cone made with a towel or handkerchief, and only when the pain was on, giving a little more just as the head was passing the vulva. He found less danger from tearing if the head be pushed forwards and delivered with the thumb or finger in the rectum in the interval between the pains. He would use ether in placenta prævia, where there had been much loss of blood. Dr. Fordyce Barker advocates the use of chloroform in nearly all midwifery cases. Dr. Kingman of Boston could only find seven deaths

recorded from chloroform in midwifery practice, and none from ether; still, we must remember how many more times chloroform is used than ether in these cases.

Dr. Buller thought the A.C.E. mixture might be very useful. He believed with many that chloroform was better suited to young children and very old persons. He had used Bichloride of Methyline a few thousand times in the Royal Ophthalmic Hospital at Moorfields, and had seen deaths follow its use. He did not like it.

The President said he had taken a deep interest in anæsthetics, but had not seen the A.C.E. mixture used. In his surgery practice he now uses ether exclusively. During six years at the hospital that he had seen chloroform administered, they had no deaths, but he had seen some very narrow escapes. They used to give a draught of spirits before giving chloroform. With ether, one may do without an assistant; this is not justifiable with chloroform, except, perhaps, in midwifery practice. He thought ether was safer at all ages. He has seen dangerous symptoms follow chloroform, even in young children. Of course if he had to operate upon an old man with atheromatous arteries he might use chloroform, as the struggling which often follows ether would be dangerous. He considered chloroform administration in the dentist's chair very dangerous, the upright position causing the patient to be more liable to fatal syncope.

Dr. Smith, while expressing his gratitude for the friendly criticism which his paper had elicited, stated that he had not, so far, heard anything to affect the good opinion he entertained for the A.C.E mixture.

Dr. Stewart having remarked that Dr. Smith concluded that the A.C.E. mixture was safer than chloroform, because it only contained one-third part of chloroform, but that it was often the case that fatal cases of chloroformization occurred when only a very small quantity of the drug had been used, and, therefore, that the small quantity of chloroform in the A.C.E. mixture was no argument in its favor.

Dr. Smith replied that it was precisely to meet such an objection as that that he had devoted several pages of his paper to show that those cases of death were not due to the exceedingly small quantity of the anæsthetic, but to the condition of the patient's circulatory and nervous system at the time. It was a well known proverb that by being united in marriage we halved our sorrows and doubled our joys, and so by uniting chloroform and ether we doubled the advantages and halved the dangers of each. Certainly chloroform was safer in midwifery cases

than in any other, because the woman was recumbent, and, moreover, she was making expulsive efforts, which guarantee a plentiful supply of blood to the brain. But it could only be entrusted to a medical man; and where there was only one, and he had the forceps to handle, chloroform was admittedly a dangerous drug. Besides, it was not a drug that could be used very well during the first stage of labor, during which, however, some women suffer more than in the second stage. Alcohol killed by the head or by coma; chloroform killed by the heart or by syncope; ether killed by the lungs or by apnœa; but by adding the three together, and then only giving one-third the quantity, we obtained an average effect sufficient to produce anæsthesia, but remaining very far short of death.

Several of the speakers having called in question the usefulness of adding alcohol,

Dr. Smith replied that alcohol was a very good anæsthetic as well as stimulant, and would have been used for that purpose in the form of vapor long ago were it not for the defect that it irritates the bronchial tubes when administered alone, but not so when mixed with chloroform and ether, the A. C. E. mixture being just as pleasant as chloroform to inhale. In conclusion, Dr. Smith said that he had so far only had occasion to use it in a hundred and ten cases, but that he would continue to employ it as long as he lived, and that, perhaps, in ten or twenty years he would have the inference of a thousand instead of a hundred cases. He did not pretend to be the discoverer of this combination, nor even to be the first person in America to use it; in fact, in reading the current literature of the day he frequently came across reference to this anæsthetic. Indeed, for all he knew to the contrary, there might be a hundred very able men who constantly used it, and yet who had not had the time, nor felt it their duty, to lay it before their professional brethren.

Stated Meeting, January 5th, 1886.

T. G. Roddick, M.D., President, in the Chair.

Rapidly-Growing Ovarian Tumor.—Dr. Trenholme showed a large semi-solid ovarian tumor which he had removed from a woman some days before. The patient, when she consulted him, was unaware that she had a tumor, but consulted him for severe abdominal pain, which had lasted some three weeks. She had only noticed a swelling for the last six weeks. Latterly, the tumor had grown very rapidly. It was removed without great difficulty, though the adhesions were numerous and the operation

was complicated and prolonged by the bursting of a cyst. The pedicle was broad, and, as is his custom, he ligated it in sections with shoemakers' thread. The patient's temperature rose to 101° the day after operation, but soon fell to normal, and remained there.

Dr. Shepherd mentioned that a short time ago he had operated in a case of ovarian tumor (in a childless married woman aged 29), with a history of only eight weeks' growth. The patient was seen by Dr. R. P. Howard a month before the operation, and at that time the tumor was of small size; it grew very rapidly, and in three weeks was quite large. At the time of operation, it was doubtful whether this rapid increase was not due to ascites. However, it proved to be a single ovarian cyst, with a solid base, containing 20 pints of thick fluid, and weighing some five pounds. The patient did well, and was able to return to her home in four weeks.

Undeveloped Bones in an Idiot.—Dr. R. L. MacDonnell showed the bones of the lower extremity of an idiot, which had been sent to the dissecting-room of McGill University from one of the institutions of the city. The individual was said to be 20 years of age, and had never spoken or walked. The bones, although of good length, were remarkably small, the femur not being thicker than an ordinary sized finger. The hip-joints were ankylosed in the flexed position, and there was contraction of the knees. The muscles of the lower extremities were strings of fibrous tissue with a little muscular tissue about them. The head, although somewhat microcephalic, was of good shape. In both femurs there was a well-developed third trochanter.

Dr. Hy. Howard said such cases were common in all lunatic asylums.

Hemorrhage into the Pons Varolii.—Dr. R. L. MacDonnell read the history of a case of hemorrhage into the pons Varolii. An old man, aged 62, was admitted into the General Hospital on 31st July, 1885. He had been picked up by the police in the streets, and was in a semi-unconscious condition, unable to communicate anything whatever regarding his history. He was a tall, thin man, very anæmic, with wasted and flabby muscles. His expression was dull and listless, and though he could utter words when spoken to, he was by no means rational. The pupils were equal, but the left was more sluggish than the right. There was slight paresis of the left side of the face, and the right side of the body was weaker than the left. There was increase of the superficial reflexes, but normal patellar reflex. The urine and fæces passed in bed; he was always in a semi-comatose

condition; pulse 90, and feeble. On the 3rd of August, his breathing was stertorous, the paresis of the left side of the face more marked, and coma more profound. Next day the coma was complete, pupils contracted ond unequal; large, moist râles heard at the bases of both lungs; toward evening he died comatose. The brain alone was examined after death, when a fresh clot was found in the pons Varolii, occupying the posterior or lower part, and situated rather more to the left than the right side. Dr. MacDonnell remarked that the central situation of the clot was shown by the equality of the paralysis on either side, and the greater weakness of the right side being accounted for by the position of the clot. It was a case of alternate hemiplegia, the left side of the face being paralyzed, though to a slight degree. This is characteristic of pontine hemiplegia, especially when the lower half of the pons is injured, though usually the fifth and sixth nerves are also involved. There was nothing distinctive in the condition of the pupils, which were not, as usually described, contracted, but merely sluggish in their reaction to light. In hemorrhage into the pons, one of two opposite conditions is usually observed: contraction of the pupils when the lesion is sudden and situated in the upper part of the pons, causing irritation of the nuclei of the third nerve; and dilatation from complete invasion and destruction of these nuclei.

Dr. Hy. Howard asked if, at the post-mortem, the ruptured vessel had been found, as it was most important to know exactly the source of the hemorrhage.

Dr. Wilkins related a case of very extensive hemorrhage into the pons, where the patient lived for eight days.

Dr. Stewart asked if the whole of the left facial was affected or only the respiratory branches?

Dr. MacDonnell, in reply, stated that the ruptured vessel had not been found, and that the whole of the facial was paretic.

Cerebral Syphilis.—Dr. Geo. Ross reported a case of supposed cerebral syphilis which had occurred in his wards in the General Hospital since his paper on that subject was read before the Society. The patient died a few days after admission, and a post-mortem was obtained. He came into hospital complaining of very severe pain in the head and vomiting. In a day or two he was quite maniacal, and then gradually became comatose. He died comatose five days after admission. At the post-mortem, Dr. Wyatt Johnston found at the base of the brain a single small flake of recent lymph, lying on and attached to the inferior surface of the facial nerve in the right side, near its origin. On slitting up the vessels at the base, this exudation was seen to

correspond to a small lateral branch of the basilar artery, where it crossed the nerve. The thrombus extended in this vessel as far as its origin from the basilar, at which point a small roughened, reddish patch existed in the intima, and its wall was thickened, but no thrombus present. The right posterior cerebral artery presented a thickened wall and narrow lumen, and was thrombosed in its whole course ; other cerebral vessels normal. On dissecting the brain, no local degenerative changes were recognized anywere. Dr. Ross remarked that it was singular that such apparently simple lesions should produce such grave symptoms. He had expected to find much more marked pathological changes in the brain.

Erysipelas in Infants treated with Zinc Paste.—Dr. A. D. Blackader read a short paper entitled " Notes on some cases of Erysipelas in the Infant, with a plea for the use of white zinc paint in its local treatment." Brief reports of the cases were given ; the last two of which had been treated by the application of white zinc paint over all the erysipelatous surface, in the manner recommended by Mr. Barwell with white lead. The same advantages were claimed for the zinc as had been for the lead, without danger of absorption of any poison which, in infants, was perhaps to be feared with the latter. These were immediate relief to pain and restlessness, followed rapidly, as a rule, by subsidence of pyrexia and arrest of the disease. The fact that erysipelas was a constitutional and not merely a local disease was not overlooked ; but it was contended that if by these local measures we moderate and assuage the local inflammation, we, at the same time, control at least some of the factors in the systemic disorder. Special advantages were claimed for it in infants. It is easily applied, drying quickly, and forming a complete dressing by itself, which cannot be soiled by the secretions, nor easily rubbed off by the restlessness of the infant. If desired, some disinfectant may be added. Soap and warm water readily remove it after the attack is over.

Dr. Hingston said that he had had himself repeated attacks of erysipelas of the face. He found nothing so comforting as frequent dusting with a puff of flour. He believed that when the system was in ill health the disease spread ; if not, that it would not do so.

Dr Trenholme said he had never seen an infant die of erysipelas. He employs a paint of elderberry tea thickened with calcined magnesia.

Dr. Hy. Howard said that last winter there were between fifty and sixty cases of erysipelas in the Longue Pointe Asylum.

All were treated by painting with a weak solution of iodine, and all recovered.

Dr. Smith said he had seen marked effects produced by one grain doses of quinine given every three hours.

The President said that a favorite prescription for cutaneous erysipelas with the late Dr. Fraser was the oxide of lead and glycerine. He himself uses a lotion of lead and opium, usually warm, but sometimes cold. He believed that great benefit followed the internal use of the tincture of iron in large doses. Patients have a tolerance for it. His usual dose for an adult is 40 minims of the tincture with 5 or 10 of chloric ether every four hours.

Extensive Posterior Cervical Laceration of Os Uteri.—Dr. Alloway related the following case, and illustrated by means of diagrams an extensive posterior laceration of the cervix uteri of long standing, and also demonstrated the operation performed for its cure :—

On the 17th of June last he was requested to see a lady stated to be in a dying condition. He found the patient in a hysterical fit, lying on her back in bed, making most exaggerated respiratory efforts—" gasping for breath,"—pulse and temperature normal, but seemed unconscious of his presence. Gave her a hypodermic injection of morphia, and assured her friends that she would not die. At the morning visit next day he obtained the following history : She was 48 years old ; had given birth to eight full-term children ; one miscarriage at third month about ten years ago ; oldest child 25 years of age, youngest 14. She stated she had not been able to do her house-work for some years past. She suffers from intense pain in the back, limbs and head. Has constant irritation of bladder. States that when young she was an exceptionally strong and robust woman, but for some years has been gradually losing flesh. She takes " nervous fits or spells " somewhat like the one in which she was found the day previous. These spells come upon her without warning, and have been increasing in frequency of late years. Her attendants and friends become greatly alarmed during the attacks, which gives her the appearance of being in a dying condition. She has been treated for ' heart disease,' ' liver complaint,' epilepsy, passing of gall-stones, ' ulceration of the womb,' and a host of other maladies, without benefit. She suffers from intolerable attacks of indigestion, reflex pains in almost every part of her body, particularly her head, back and sides. She spends nearly all her time in bed, and carries a mixture of bromide and another of laudanum to make her condition tolerable. Her menstrual

function is still active, but irregular ; the flow has always been, until the last year, very excessive in quantity, and accompanied with pain. On vaginal examination, the pelvic peritoneum and parametric cellular tissue are fonnd quite free from callosities or other evidences of past inflammation. The uterus is freely moveable, and all pelvic parts painless to the touch. The vaginal walls are normal ; the uterus is acutely anteflexed. If the perineum be now well-retracted by Sims' speculum, a very odd-looking, large tongue-like body is seen hanging down two inches and a half into the vagina from the vault above. In searching for the external os, none can be found, but high up on the posterior surface of this cervix-like body, about half an inch from the vaginal vault, the sound suddenly passes into an opening and disappears forwards to the depth of about two and a half inches. On carefully examining this peculiar cervix, the anterior surface appears to be of the normal squamous epithelium of the portio-vaginalis exterior, while the posterior surface has the macroscopic appearance of the gland tissue lining the cervical canal. The case now appeared to be an extensive posterior laceration of very long standing. Hypertrophy had taken place from the advanced state of cystic degeneration and other chronic changes consequent upon constant and long-continued irritation to which the exposed gland tissue had been subjected. The operation for the cure of the lesion consisted in making a long horse-shoe shaped denudation three-eighths of an inch wide and very deep, so as to excise as much cicatricial and cystic tissue as possible, and then drawing the edges together by six wire sutures, rolling the denuded edges of the cervix inwards upon its longitudinal axis. In this way the cervix was re-formed back to its normal condition and shape, the external os being formed at the apex of the body of the last suture. Union was complete throughout ; the sutures were removed on the tenth day. The convalescence was slightly protracted from debility, but the patient is now in perfect health, and takes a great deal of exercise. She is free from pain, dyspepsia, and " nervous spell." She is no longer troubled with her heart or liver, *and has not passed any more " gall-stones.*" The flow has returned two or three times since operation, but when last heard from she stated that seven weeks had elapsed since her last period ; probably the menopause had set in.

Dr. Alloway drew attention to the extreme rarity of this lesion. Emmet states that of 164 operations, only 4 were for posterior laceration. Goodell, in 113 successful cases, records no posterior laceration ; and in no other reliable authority can he find reference to this rare lesion. Emmet supposes that when

it does occur it heals spontaneously, but that it often causes parametric inflammation, with cicatricial bands and retroflexion resulting.

Salivary Calculus.—Dr. Hingston exhibited a salivary calculus which had ulcerated its way out of the sublingual duct. The patient had been sent to him to be operated on for supposed malignant disease. The parts about the floor of the mouth were greatly inflamed. This condition had lasted for months.

Dr. Jas. Bell said that some time ago he had removed a similar calculus from Wharton's duct. The patient had been sent to him from the country to be treated for cancer of the mouth.

Dr. Smith mentioned having removed last year a phosphatic calculus from the tonsil $1\frac{1}{4}$ inch long.

CHATHAM MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, Feb. 6th, 1886.

Dr. G. D. Flemming in the Chair.

(*From our own Correspondent.*)

Myeloid Sarcomata.—Dr. Holmes exhibited several tumors removed at a post-mortem recently, also kidneys and a portion of the liver of the same subject, presenting secondary deposits. The largest tumor involved the anterior portion of the 4th rib on the left side; other ribs were also involved, and the body of the 9th dorsal vertebra. There were a few deposits in the liver; the right kidney was enlarged and cystic, weighing 8 ozs. There were also a number of secondary deposits upon the upper surface of the diaphragm. The pancreas, spleen, lungs and left kidney were apparently healthy. The stomach and duodenum were very much contracted. The patient was first taken ill about 18 months previous to his death. First complained of pain in his left side; this pain persisted in spite of treatment. About two months subsequently a small enlargement appeared on the 4th rib. He afterwards suffered great pain in his back and down his left leg. The last three months of his life he suffered from nausea, distressing diarrhœa, and great wasting. Dr. Jas. Stewart of Montreal saw the patient in September, and diagnosed either syphilis or multiple sarcoma. Iodide of potash as much as ℥i was given three times a day for some time, without relief however to his symptoms.

Enlarged Tonsils and their Removal.—Dr. Rutherford read a paper on this subject. After referring to the etiology of

hypertrophied tonsils, of which age plays a most important part; and touching upon their pathology, he spoke at length of both the local and constitutional consequences of these enlargements. He considered that they often impaired the general health from disturbed sleep, loss of proper rest, development of dyspeptic symptoms, etc. Deafness, as the result of inflammatory changes extending up the Eustachian tube to middle ear, not infrequently occurs. Catarrh of the nasal and pharyngeal mucus membrane is frequently the result of this condition. The reporter has frequently observed anæmia, chronic cough, abnormal voice and deafness to disappear after the removal of enlarged tonsils, without any specific or general treatment. In his remarks on the treatment of these diseased structures, he first referred to constitutional remedies, such as syrup of the iodide of iron, cod liver oil, etc., which are important especially in strumous subjects. Locally, astringents had not proved very effectual in his hands. Escharotics are more tedious and painful than the knife. The indications for excision were the presence of symptoms of impaired nutrition, relapsing inflammations, interference with respiration, etc. He considered that the operation was a perfectly safe one, easily performed, productive of much good in suitable cases, and a procedure too frequently relegated to the specialist. He always uses McKenzie's tonsillotome, and removes both tonsils at one sitting. Cocaïne, 4 per cent. solution, applied freely to the surface of the tonsils and fauces (unnecessary to inject the gland), not only allays the pain of the operation, but, what is more important, limits materially spasm of the constrictors of the pharynx, and thus facilitates greatly the operation.

Dr. Tye did not approve of the indiscriminate removal of enlarged tonsils; preferred palliative measures in most cases. Believed the enlargement was generally due to constitutional causes, and required general treatment. Had used locally, with benefit, equal parts of tr. iodine and glycerine.

Dr. Holmes only removed enlarged tonsils with the knife after other measures had failed to give relief. Considered loss of sleep and deafness prominent indications of their removal. Prefers scissors or bistoury and vulsellum forceps to more complicated instruments.

Dr. Flemming has removed enlarged tonsils for deafness and frequent recurrent attacks of quinsey. Does not consider it necessary to remove the entire gland.

TORONTO MEDICAL SOCIETY.

Stated Meeting, Feb. 11th, 1886.

Dr. Cassidy, President, in the Chair.

(*From our own Correspondent.*)

Dr. Powell related a case of injury, and showed specimens of bulbous enlargements of the ends of nerves, which were the cause of neuralgic pains in the stump of an amputated arm. The Doctor went on to say that, about six years ago, a saw-mill in the neighborhood in which he was then practising "ran away with itself"—that is, the control of the machinery was lost—and one of the circular saws flew in pieces, a fragment of which came in contact with his patient, producing a wound extending from the angle of the scapula to the region of the left kidney, cutting through several of the ribs—portions of which he afterwards removed for necrosis; the accident also produced such injury of the left arm as to require amputation. The patient recovered, and a good stump was formed. Some three years subsequent to the accident, the patient again consulted him for neuralgic pains in the stump. On examination of the stump it was found that bulbous enlargements existed in the ends of the nerves, but somewhat higher up than the cicatricial tissue of the stump. It is important to observe this, as it is by some asserted that these neuralgic pains which sometimes occur in stumps are due to pressure of the ends of the nerves by the cicatricial tissue of the scar. There were two bulbous enlargements—one at the inner and anterior aspect of the arm, involving the ends of the median, ulnar and internal cutaneous nerves, where they are in close contact with the brachial artery; the other enlargement existed at the cut end of the musculo-spiral nerve. Both these bulbous enlargements were removed, and the patient made a perfect recovery. The specimens of the condition of the affected ends of the nerves, which were shown the members, illustrated well the diseased condition.

The President related a case in connection with this, under the care of Dr. McFarlane at the General Hospital, where a girl had received a bullet wound in the region of the musculo-spiral nerve, producing pain in the arm beyond the seat of the injury. In this case, there being no wound of exit of the bullet, the surgeon concluded the missile to be still in the arm, and pressing down upon it, removed the bullet, and pain disappeared.

Dr. Cameron showed a specimen of an acephalic monster, with spina bifida extending down the spine throughout nearly

the whole of its extent. There was nothing to account for the production of this condition. The mother had had some family disagreements some time prior to the birth of the child.

An interesting discussion ensued upon the possibility of maternal impressions affecting the fœtus.

Dr. Powell related several cases in his practice where fright to the mother in the pregnant condition had been followed by a monstrous condition of the fœtus.

Dr. Cameron desired an explanation of how these maternal impressions affected the fœtus.

Dr. Davidson related a case in his practice where in the new-born child there was an absence of all the fingers of the right hand and the first phalanx of the thumb on the same hand. The mother had been in the habit of seeing a girl sitting in church, just in front of her, having a hand presenting a similar appearance to that of her child. The condition of the hand in this girl was produced by a burn, and the mother thought she had thus got the impression.

Dr. Atherton, on the 22nd of October last, removed a fibroid tumor of the uterus weighing about 60 lbs. The patient is 35 years of age, and the tumor first showed itself immediately after marriage, 12 years ago. Its seat of growth was in the anterior wall of the uterus and was firmly adherent to the abdominal wall, evidently receiving a large part of its blood-supply through the enlarged branches of the epigastric arteries. The patient has done well, and will likely make a perfect recovery. She has gained 28 lbs. since the operation.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Eightieth Annual Meetiny, held in Albany, Tuesday, Wednesday and Thursday, Feb. 2nd, 3rd and 4th, 1886.

The President, Dr. A. Vander Veer of Albany, in the Chair.

(*From our own Correspondent.*)

The President called the meeting to order at 10 a.m., Tuesday.

The President's Address.—In his address, the President recommended that the delegates from the county societies and permanent members be increased fourfold. He expressed his strong disapproval of the action of the meeting of the American Medical Association at New Orleans concerning the Congress at Washington in 1887. He strongly urged the necessity of a

State law for stringent regulations regulating the entrance of members of the profession to practice.

The first paper read was by Dr. Stiles of Oswego. He gave the history of a case of *Abscess of the Kidney*, which terminated favorably. Judging from the evidence adduced by Dr. Stiles in his paper, we would consider the case to be one rather of perinephritic abscess bursting into the bladder.

Dr. Corning of New York read a paper on the alleged curative influence of prolonged sleep in cases of neurasthenia.

After Dr. Sherman of Ogdensburg had reported a case of complete recovery from an acute empyema by free drainage, a very interesting discussion followed on *Compression of the Lung and its Treatment.* The following points were dealt with :—(1) The length of time the lung may be crowded up under the clavicle, and yet be restored to its normal condition ; (2) such treatment as will result in the perfect expansion of the lung.

Dr. A. L. Loomis said, with regard to the first question, that the answer depended upon the extent to which the pulmonary pleura was involved ; if it was not involved, or involved only to a slight extent, the lung might remain compressed a long time and yet perfect expansion take place. He considered that in cases of acute suppurative pleurisy, where there was only slight interstitial changes in the pleura, if the pus was evacuated inside of one or even four weeks, we might look to perfect expansion of the lung occurring. The sooner the fluid is removed in acute suppurative pleurisy the better, and this should be done by a free opening. If the pus was sweet, he would not recommend washing out the cavity. He looks upon antiseptic injections as unnecessary, and even injurious in these cases.

Dr. Ely of Rochester read a thoughtful paper on "*Pulmonary Gymnastics*," referring specially to their usefulness in warding off phthisis in those predisposed to it.

Dr. Loomis, from his own personal and general experience, would only recommend these exercises to patients in fairly robust health. He considers their action very injurious in delicate subjects. He said that athletes in his experince frequently die from phthisis.

Dr. Jacobi said that deep inpirations and exercise of the respiratory muscles generally, would prove beneficial in persons of narrow chest and early ossification of the costal cartilages. Such exercise would result in some expansion of the lung upward and considerable downward.

Dr. Bendell of Albany read a paper on the treatment of *Aural Polypi by Injection of Carbolic Acid.* Having performed this operation a number of times with considerable success, he recommended it to the profession as a sure and reliable means of getting rid of aural polypi.

In the discussion which followed, it was clearly shown that we had quicker, surer and safer means of dealing with aural polypi.

A carefully prepared paper on the results of the *Operation for Convergent Squint* was then read by Dr. St. John Roosa of New York. He considered that the fundamental condition for the production of convergent strabismus was the loss of vision in one eye. He advocated tenotomy, and said that he always informed his patients that from one to four operations might be necessary. He thought that the best time for an operation was from the fifth to the seventh year. An earlier operation deprived the patient of the assistance of convex glasses. He had had no good results in attempts to cure squint by the use of atropine and glasses, and he had quite abandoned that mode of treatment. The operation, he said, did not improve the vision; for that purpose glasses were necessary. He obtained good results in 80 cases out of 111, and he thought the number might have been increased to 95 if an earlier operation had been allowed. He believed that no substitute had been found for tenotomy.

Dr. G. R. Fowler of Brooklyn read a paper on the *Non-Union of Fractures.* The following is a summary of the treatment recommended by Dr. Fowler in these cases:—1. In all cases of simple delayed union, the percussion method of Thomas, combined with an efficient retention apparatus, will be found to offer the readiest and most efficient means of bringing about union, provided this does not depend upon some dyscrasia. 2. Brainard's method of drilling the fragments, and, this failing, freshening the ends of the bones and uniting the periosteum, combined or otherwise, according to the exigencies of the case, with wire suture of the fragments, should take the place of the old Dieffenbach operation. 3. Cases in which it is found impossible, because of extensive loss of bone substance, to unite the periosteum by sutures, or wire together the ends of the bones, should be treated by bone transplantation, under antiseptic precautions, either by the method of Macewen or that of von Nussbaum.

Dr. Hadden of New York read a paper on "*Rheumatic Affections of the Joints.*" He considers that rheumatoid-arthritis attacks persons who live chiefly on amylaceous and saccha-

rine foods. He recommends the substitution of nitrogeneous for amylaceous and saccharine foods, and by this method, he maintains, good results are obtainable.

A paper on "*Infant Feeding*," by Dr. Brush of Mount Vernon, was followed by one on the use of "*Papayotin in Diphtheria*" by Dr. Jacobi of New York. The action of this agent in dissolving diphtheritic membrane was illustrated. Specimens of egg, meat and cheese digested by a solution of papayotin (1 to 250) were exhibited.

Dr. A. L. Loomis of New York read a very able paper on *General Arterio-Capillary Fibrosis and its Relation to Cardiac and Renal Disease.* In a future number we will refer more particularly to the subject of this paper.

Dr. Hopkins presented a paper on "*Ulcerative Endocarditis*," in which he referred to the labors of Osler and Rosenstein. Several illustrative cases were narrated.

Dr. Willis Ford of Utica then read a paper on the *Early Management of Cases of Mental Depression.* He considers that many cases of grave insanity might be prevented by early proper treatment. Cases of mental depression, where the emotions alone are affected and where there are no delusions, are improved by diversion and travel. In some cases of sudden onset of melancholia, treatment by sedatives has been effective.

Mr. Lawson Tait forwarded a paper on "*Methods of Diagnosis*," which was read by Dr. Ward of Albany.

"Diseases of the Fallopian Tubes, with Reports of Cases and Characteristic Specimens," was the title of the next paper by Dr. W. G. Wylie of New York. Dr. Wylie thinks that four-fifths of the cases described as pelvic abscesses have their origin in inflammation of either the ovaries or tubes.

Dr. J. A. S. Grant-Bey, of Paris, communicated a paper on "*Cholera.*" Dr. Grant looks upon this disease as caused by a living organism, the *habitat* of which is the Delta of the Ganges. All attempts on the part of this organism to form new *habitats* has failed ; at least so far as Egypt, Europe and America are concerned, the organism has different stages of development, and it is not capable of inducing a choleraic attack except at a certain stage of its existence. Hence recent choleraic stools are not contagious, but stale ones are highly so.

Second Day—Wednesday, Feb. 3.

Dr. Simmons presented a paper on *Acute Nephritis, especially as following Diphtheria.* Two general plans of treatment

were proposed—the one to increase the excretory action of the kidneys; the other to act on the other excretory organs, the bowels and the skin. A combination of these methods is the best plan.

Dr. W. M. Carpenter of New York read a paper having the title of *Clinical Note on Albuminuria and Glycosuria.*

Dr. Lucien Howe of Buffalo exhibited a white rabbit in which he had transplanted a black eye about three days before. The coloration of the eye showed that the circulation had been partially re-established. This operation had been performed several times by the author, who referred to certain improvements in the *technique.* Some sloughing always took place.

Dr. Mittendorf said the first transplantation of the eye in man, by an operator in Paris, had recently been reported, and it appeared that by the sixth week the cornea had sloughed; therefore the final result of the operation was not successful.

Dr. E. L. Keyes of New York read a paper on *The Treatment of Varicocele and Hydrocele.* For varicocele, he passes a catgut ligature subcutaneously, and ties the dilated spermatic veins high up, above the point where they become tortuous. He has had twelve consecutive successful cases where this procedure was adopted. No unpleasant symptoms or complications had followed. For hydrocele, he strongly recommends carbolic acid injections.

Dr. L. D. Bulkley of New York read a paper on *Non-Venereal Syphilis*, in which he drew the following conclusions: 1. Syphilis was not necessarily a venereal disease, but in a certain proportion of cases acquired quite unconsciously, and in an entirely unexpected manner. 2. Failure to obtain a venereal history should not lead to the conclusion that certain lesions were not those of syphilis. 3. The syphilitic virus could be carried a long distance, and, after some time had passed, be able to cause syphilis in the inoculated. 4. Non venereal changes are often mistaken for epitheliomata. 5. Non-venereal syphilis often shows great malignancy.

Dr. F. N. Otis of New York read a paper entitled *The Limitation of the Contagious Period of Syphilis in relation to Marriage, etc.* Dr. Otis considers it as absolutely proved that lesions of the tertiary stage are not contagious, and that the limit of contagion may be fixed at a period of five years.

Dr. R. F. Weir of New York read a paper on "*Antiseptic Irrigation of Joints for Chronic Serous Synovitis.*" He recommends this treatment where the synovitis has lasted longer than

a month. He uses a 5 per cent. solution of carbolic acid for irrigation. The moderate reaction which follows soon subsides. The joint is kept immovable for ten days.

In the evening, a very able address was delivered by the President, Dr. Vander Veer, on the *Water Supply of our Cities and Villages.*

Third Day—Thursday, Feb. 4.

Dr. Simmons of Poughkeepsie read a paper on *Leprosy in Japan.* No country, he said, afforded greater evidence than Japan in support of the hereditary transmission of the disease, and many facts tended to confirm the theory of its parasitic nature.

Dr. Bell of Brooklyn called attention to the danger of the spread of leprosy from the Norwegian colonists in the Northwestern States by intermarriage and in other ways.

Dr. W. H. Thomson of New York then read a paper on the *Prevention of Hemiplegia.* He laid stress on the importance of preventing sudden increase in the blood-pressure, and with this end in view he recommended small and repeated doses of corrosive sublimate, 1-30th of a grain, several times daily. The importance of avoiding stimulants and tobacco was referred to, as well as the avoidance of excess in the use of nitrogenous foods.

F. C. Curtis of Albany read a paper on *Ringworm of the Scalp*, with special reference to its treatmont. Dr. Curtis has found a chloroform solution of chrysophanic acid (7 grains to the ounce) as the most effective means in getting rid of this troublesome affection where it has broken out in children's asylums and hospitals. Without depilation, a cure can be effected by this agent.

The Committee on Nominations then presented their report, which was accepted :—

President—W. S. Ely, M.D., Rochester.

Vice-President—S. Van Etten, M.D., of Port Jarvis.

Secretary—W. Manlius Smith, M.D., of Syracuse.

Treasurer—C. H. Porter, M.D., of Albany.

DELEGATES.

To the Canadian Medical Association—Dr. B. F. Sherman, Dr. A. Vander Veer, Dr. W. W. Potter, and Dr. A. M. Phelps.

To the Ontario Medical Association—Dr. L. Howe and Dr. F. Winkel.

To the German Surgical Congress and the British Medical Association—Dr. A. M. Phelps.

After a vote of thanks to the President and other officers, and to the Committees, the Society adjourned, to meet in Albany on the first Tuesday in February, 1887.

CANADA

Medical and Surgical Journal.

MONTREAL, MARCH, 1886.

DIGESTIVE FUNCTIONS OF THE BILE.

A satisfactory answer to the question, What is the genuine digestive function of the bile? has long been a desideratum. True, both the experience of the physician and that of the experimental physiologist have been in accord as to certain of the collateral uses of the bile—*e.g.*, what it prevented, in what respects it was a help to the other digestive juices, but exactly what changes (if any) it wrought in the food were unknown. We are glad to notice that a contribution of a very original and definite sort has recently been furnished by Dr. Landwehr, the principal assistant in the laboratory of Professor Hoppe-Seyler. It is in reality a continuation of work on which this physiological chemist has been engaged for some years. We have a personal acquaintance with the investigator, and know him to be a most enthusiastic and indefatigable worker.

It is commonly stated in works on physiology that the bile has the power to emulsify fats; and this being considered as equivalent to the digestion of fats, it was thought that to answer that the function of the bile was the emulsification of fatty substances was satisfactory. But any one who would make the experiment might ascertain that bile shaken up with fat, even if both were somewhat warmed, formed but the feeblest sort of emulsion; indeed, little better than one with so much water, and, perhaps, no better than the latter with an amount of alkali in it equivalent to what is found in bile. The foundation, then, for this doctrine was most unsatisfactory. The case was very different if pancreatic juice or a watery extract of the gland itself were used. Landwehr has therefore attempted to explain these facts, and

furnish at the same time a consistent theory of biliary digestion. This investigator has spent much time in examining substances derivable from the animal kingdom allied to mucilage or the vegetable gums ; and he has isolated from different sources what he has named "animal gum" (mucilage). Mucin, he finds, may be considered as made up of a carbo-hydrate and a globulin substance. The latter, it will be remembered, belongs to that class of albuminous substances characterized by great solubility in weak solutious of common salt. Animal gum was found in chyle and in milk; but what was of greater significance, this substance was extracted in considerable quantity from the pancreatic gland itself and from pancreatic juice, hence the emulsifying power of the latter. Its formula corresponds to that generally assigned to starch, dextrin, etc., viz., $C_6 H_{10} O_5$.

The demonstration of a similar function for bile is somewhat more circuitous. By the addition of acetic acid or alcohol to saliva it can be easily shown that it abounds in *mucin*; and it is well known that the intestines, etc., secrete large quantities of the same, for the existence of which hitherto no adequate need has been suggested, at least none commensurate with the quantity furnished.

It is found that if bile be added to saliva, the mucin of the latter is decomposed into its component carbo-hydrate and animal gum or mucilage, the latter acting on the fats, and, as in the case of the pancreatic juice, emulsifying them. Now, if all this is substantiated by future investigation, it would seem that we have at last found the definite digestive function of the bile, and the explanation of the abundant secretion of mucus in various parts of the alimentary tract. It must be borne in mind also that *mucin* is not decomposed or destroyed by gastric juice, so that in the case of those animals which bolt their food (*carnivora*), and in which it is not easy to understand how there can be any appreciable amylolytic function of the saliva, we can now see how the saliva swallowed with food and at other times may be finally used in furnishing the mucin essential for biliary emulsification. Bile itself, though free from albumen, abounds in mucin.

Dr. Landwehr's researches, with others of recent date, are interesting scientifically, as showing how numerous are the re-

semblances between the animal and vegetable world, and in very unsuspected directions. It has long been known that cholesterin, lecithin, nuclein, etc., occur in plants as well as animals; and Darwin's investigations of the sensitive plant seemed to indicate that it had the power of digesting animal bodies (insects); but what is of startling interest is the fact that very recently an English investigator has shown beyond doubt that in the papaw plant there is a ferment capable of acting in almost all respects like the *trypsin* of the pancreatic juice—*i.e.*, capable of changing albumen into peptone, leucin and tyrosin.

Thus more and more is being fulfilled the prediction (uttered in his public address of two years ago) of that great master, Hoppe-Seyler, that it would be found that animals and plants were, in their vital processes, more alike, fundamentally, than had been hitherto supposed.

Communication.

THE INTERNATIONAL MEDICAL CONGRESS.

To the Editors of THE CANADA MEDICAL & SURGICAL JOURNAL.

SIRS,—In the February number of the CANADA MEDICAL & SURGICAL JOURNAL I read an editorial reply to my letter as published in its January number in reference to the International Medical Congress of 1887, to be held in Washington, United States of America. To my sorrow, it breathes the same spirit as the article which called forth my letter. For some reason or other, your JOURNAL and other Canadian ones seem to have taken their cue from the defunct *Medical Times and Gazette* of London and some journals of the United States whose editors are not members of the American Medical Association, and some of whom have ignored its ethical requirements, and, consequently, cannot join in its consultations. Why you have adopted this course towards the action of so large an association as the A.M.A. I know not, and can only surmise. In fact, it is the largest representative society in the world, so far as figures show. I well know the strong affinity that exists between the Canadian profession and that of Great Britain, and I am not surprised that the London meeting of the International Medical Congress should be considered by you as the perfection of excellence, but, strange to say, no allusion to the Copenhagen Congress or its precedents, and the illustrious men who composed these congresses. Can you show me, in any instance, where the American medical journals used their influence to make them failures, even if their friends did not "roost on the highest pole" or any one of the American profession.

If I am correctly informed, there were jealousies and internal bickerings in the English profession in the organization of the London Congress, in which "science" had no part, and many men as illustrious as those who were made prominent were left in the cold and took back seats. Did the American medical profession try to make the chasm wider, and to dictate who were right and who were wrong? You say

"At present the prospect is that the PEERS of the men who organized the London Congress (why not include Copenhagen) will be absent from Washington." Is not the CANADA MEDICAL & SURGICAL JOURNAL doing its best to promote that absence? Would it not be well for you to take counsel from the London *Lancet?*" Were we to criticise the editorials in the Canadian medical journals, we would not fall *much short* in arriving at the conclusion that they did not want the Washington Congress of 1887 to be a success.

But for fear I may have misjudged, and that ignorance of the facts in the case have led to the editorial expression of the Canadian medical press, I would respectfully refer you to the editorial in the *Chicago Medical Journal and Examiner* for December, 1885, and to the editorial in the January number of the same journal; also to the editorial in the *Journal of the American Medical Association* for Feb. 6th, 1886. I also take pleasure in enclosing "A Medical *coup d'état* in Philadelphia," to show you how they do things in the "city of brotherly love," when law has to yield to force.

I am happy to inform the readers of the C. M. J. that the medical profession abroad will be represented in the Washington Congress by many of its most illustrious men. The A. M. A. will take no back steps at St. Louis, and if the few names of the American medical profession given in the JOURNAL are the only ones to be placated, and the success of the Congress rests wholly upon *their sweet ipse dixit*, then, as you say, "it would be better to abandon the Congress." When the medical savants of Europe come to Washington, they will be much surprised at the scientific papers presented and the discussion had upon their own papers, even should the "men eminent in their respective departments" fail to put in their appearance on the occasion.

Yours respectfully,

WM. BRODIE, M.D., *President A.M.A.*

64 Lafayette Ave., Detroit, Mich.

Medical Items.

—Dr. G. E. Fenwick, Professor of Surgery, McGill University, has been elected an honorary member of the New York State Medical Society.

—Dr. Stirling, Professor of the Institutes of Medicine in the University of Aberdeen, has accepted the chair of Physiology in the Victoria University, Manchester, rendered vacant by the resignation of Dr. Gamgee. Dr. Stirling was led to prefer Manchester to Aberdeen chiefly on account of the well-equipped laboratories of the Victoria University, which will enable him to engage in original research.

THE NEUROLOGICAL SOCIETY OF LONDON.—At a recent meeting of the prominent neurologists of London, it was decided to form an association to be known as the "Neurological Society of London." Dr. Hughlings Jackson has been elected president for the ensuing year, and Dr. Wilks and Sir James Crichton Browne vice-presidents.

Pathology of the London Herbalist.—"You know, sir, bad spirits means that the liver is out of order. The doctors gives you a deadly mineral pizen, which they call blue pill, and it certainly do pizen 'em, but then you run the chance of being pizened yerself. You 'ave noticed the 'oles in a sheep's liver after it's cut up, 'aven't you? Well, them 'oles is caused by slugs, and 'uman bein's is infested just the same. So is awsiz (horses), but they don't never take no blue pill. Catch 'em! The doctors knows all about it, bless yer, but they don't talk so plain as me. *I* calls out-of-sort-ishness 'slugs in the liver,' and pizens 'em with three penn'rth of dandelion tea, for which I charges thrippence. *They* calls it 'sluggishness of the liver,' and pizens 'em with a penn'rth of blue pill, for which they charges a guinea, and as often as not they pizens the patient too."—*London Cries.*

Cod Liver Oil with Hypophosphites.—As a nutrient means of checking and repairing bodily waste, and remedying disease of the throat, chest and lungs, Scott's Emulsion has long held the foremost rank among preparations of cod liver oil. In it not only is the disagreeable flavor and nauseating effect of cod liver oil in its crude state overcome, so that it is pleasant and palatable, but it holds in combination the hypophosphites of lime and soda, a most important remedial agent and adjunct to the cod liver oil. The perfect chemical union of this valuable combination as prepared by this firm give it an exalted position in pharmacy, and brings this hitherto valuable but almost useless article (on account of its repulsive taste and odor) into practical utility for supplying to the depleted system iodine, bromine and phosphorous in the most desirable and acceptable form.—*Townsend's Quarterly Epitome.*

—Trypsin (Fairchild's) is now offered as a solvent for diphtheritic membrane. The well-known properties of this principle of the pancreatic juice give the strongest grounds for anticipating success in its application for this important purpose. Trypsin acts quickly and powerfully upon fibrin and fibrinous membrane. It is not dependent upon the interaction of acid, as is the case with pepsine. It is most active in slightly alkaline media. It may be applied by spray or brush. In practical use the results have been very encouraging. Messrs. Fairchild Bros. & Foster wish to respectfully announce, that, owing to the great cost of this product and their inability to more than keep pace with the actual demand, they cannot offer samples. It may be obtained of the principal drug houses in this country, and is dispensed in $\frac{1}{2}$, $\frac{1}{4}$, and 1 oz. bottles, with full directions.

CANADA

MEDICAL & SURGICAL JOURNAL

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Original Communications.

CASES OF CEREBELLAR DISEASE.

By GEORGE WILKINS, M.D.,
Professor of Medical Jurisprudence and Lecturer on Histology,
McGill University.

(Read before the Medico-Chirurgical Society of Montreal.)

Case I.—On the 20th Nov., '82, about breakfast time, I was called to see a young lady, aged 19, who, I was told, had just had a fainting fit of some kind, which she had not come out of up to that time. On arriving at the house, within a few minutes, I found her lying dead on the sofa. It appears she had arisen at the usual hour and expressed herself as being quite well, in reply to her mother, who awakened her with her customary morning salutation. She came down stairs to breakfast, perfectly well, and went to the front window to look out at the passers-by whilst her parents went in to their breakfast. After waiting a few minutes, and not finding her coming to the table, her mother came into the room and found her lying on the sofa. In reply to the question what was wrong, she said " I have such a frightful pain in my head, I cannot stand it." Then she said she was going to vomit, which she did, and after that she expressed herself as being easier. Her mother returned to the breakfast-table, and coming back in a few minutes to inquire how she felt, found her as I saw her on my visit—dead.

I asked for a post-mortem examination, but did not like to press it then. A fortnight after interment, however, the parents consented. The autopsy was made by Dr. Osler, with the assist-

ance of Dr. Wyatt Johnston and myself. The brain was the only organ examined. On removing it, nothing abnormal was observed on the upper surface of the hemispheres. On turning it with its base upwards, the under and lateral surfaces of the right temporal lobe were seen to be covered with an extensive, but thin clot; so also were the pons and medulla. On looking at the cerebellum, the right lobe was observed to be considerably larger than the left. On cutting into it, a large clot, the size of a plum, was discovered close to the central lobe. On examining more closely, a pinhole aperture was seen on the superior surface of this lobe of the cerebellum, and was here continuous with the clot covering the temporal lobe. A blood-vessel had burst in this lobe of the cerebellum, the blood escaping into the subarachnoid space covering it and along this space, forwards, on to the cerebrum, and downwards into the fourth ventricle. The blood pressing on the respiratory and circulatory centres, which are situated in the floor of this ventricle, arresting its function, caused immediate death.

Case II.—On the 23rd of December, 1884, I was called to see a young lady, aged 16 years, who had been complaining of headache, suffering, as her mother thought, from a bilious attack. Her history was that she had awakened on the night of the second day previous to my visit complaining of intense pain in the back of her head and vomiting. Both lasted four or five hours, and then gradually ceased. She kept in bed the following day, during which time she suffered very little. During that evening, however, the pain came on as violent as before, and with it the vomiting. The next day I saw her for the first time. She then complained of pain in the left occipital region. The pain was constant and very acute. Tongue slightly coated, with red tip. Temperature normal; pulse 72. At the time I thought the pain was possibly neuralgic, and advised hot hop poultices over the painful part; also administered bromide of potassium. About midnight her brother called on me and stated that there was no relief whatever to the symptoms, and that the retching was very troublesome. The constant character of the pain and vomiting caused me then to doubt my diagnosis and

suspect cerebral mischief. I advised stopping the hot poultices, but to give the bromide mixture more frequently, and if still no relief within three or four hours, to apply ice to the head. The next morning, at 8 o'clock, I saw her again, when her parents told me she had been in agony all night. She was very quiet during my visit, and it was remarked to me that it was the first time that she had a moment's rest since the previous evening. Her temperature was normal, pulse 70, and skin moist. I felt quite puzzled to account for the symptoms. I suspected the possibility of tubercular disease of the brain, but I felt I could not reconcile that theory with the absence of febrile and other confirmatory symptoms. I left, intending to call again about noon the same day, but being unavoidably detained, arrived there again at 2.30 the same afternoon. I found that she had died most unexpectedly about five minutes previously. They told me that the pain in the head had kept up until the last two hours, when it ceased, but that she complained of numbness all over her body. She asked to have all her limbs rubbed—at one time her legs, then her arms, at another moment her shoulders. This condition kept up for nearly the entire two hours. They say she was quite bewildered, crying out "What is the matter?" "What can it be?" Her sensations were most peculiar. She said she felt as if she were paralyzed. At no time that I saw her was there any loss of power. Up to the last moment they say she was able to move her limbs, and her intellect was perfectly normal. At the time of her death she was sitting up in bed, her sisters rubbing her arms and she crying out about the peculiar sensations, when she fell back dead. I immediately thought of the preceding case, and considered this one of cerebellar apoplexy. I made several attempts to get permission for an autopsy, but could not succeed, consequently can draw my conclusions only from the symptoms and their result. From these I think I am justified in enumerating this case amongst those of cerebellar disease.

Case III.—The following case was admitted into the Montreal General Hospital under my care. It has been reported for me by Dr. Gustin, one of the resident medical officers:—

J. F., aged 17, admitted under Dr. Wilkins on June 10, '85, complaining of headache and pains (which appeared to be muscular) all over the body, also dizziness, and general weakness; vomiting also was present. He dates the present attack to two weeks previously, up to which time he was perfectly well. At that time he fell from a cart, striking his shoulders and then his head. He was removed home; vomiting set in immediately and lasted several days, and then gradually subsided. At the expiration of about ten days, feeling better, he endeavored to start work again, but having a return of all his symptoms, he was obliged to desist. He had pains in back and over the body generally, dizziness, vomiting, loss of appetite, and elevation of temperature. These symptoms increasing in intensity, he was brought into hospital. On admission, he had a prematurely old appearance—looked quite 25 years of age. He had a stupid and lethargic expression, with dilated pupils. His tongue was coated, and red at both tip and borders. Bowels constipated. Complains very much of headache, backache and insomnia. Since admission, he had been vomiting constantly a thin, grumous fluid. Pulse 70, full and strong; temperature 100°; respiration 20. His mental condition was irritable and dull; not inclined to answer questions; did not want to be disturbed in any way—taking medicine or otherwise. His urine was examined and found to be normal. There appeared to be marked iliac tenderness of both fossæ. The temperature became normal on the second day in hospital, and remained so during the progress of the disease. On the third day after admission, some slight retraction of head was observed: he could be elevated by the contracted neck muscles. Movements were performed in a rapid and jerky manner. He made several attempts to leave the bed and walk about. He was able to walk a few steps, but was very unsteady and weak. Up to this time he had perfect control over bladder and bowels. On the following day, whilst the resident medical officer, Dr. Gustin, was making his morning rounds of the ward, he observed him become suddenly cyanotic and almost asphyxiated. Pulse 120; pupils contracted; no paralysis nor spasmodic contraction; unable to open mouth;

1-120 grain of atropia sulph. was administered hypodermically and artifical respiration commenced. Under this treatment the pulse came down to 100 ; patient opened his eyes and attempted to yawn. As soon as artificial respiration was stopped, he relapsed into former cyanotic condition. By means of this treatment patient was kept alive until the arrival of the attending physician in fifty minutes. He then diagnosed pressure of a fluid character occurring suddenly on the respiratory centre, and thought it useless to continue artificial respiration. Patient died within two or three minutes after its cessation.

A post-mortem examination was made next day by Dr. R. J. B. Howard. All the organs were carefully examined and noted, and nothing abnormal observed, except where it was expected to be present—viz., in the vicinity of the medulla oblongata. The membranes of the brain were found to be perfectly normal, except a small portion overlying the cerebellum between the flocculus and the medulla oblongata. On a superficial examination, pus was discovered in the arachnoid space formed by these membranes, between the medulla oblongata and the right lobe of the cerebellum. On carefully removing the membranes and raising the medulla, several drops of thick, creamy pus were observed between the cerebellum and the floor of the fourth ventricle. On compressing the right lobe of the cerebellum, pus was noticed escaping from its under surface, close to the inferior vermiformis process. On cutting into this lobe, an abscess cavity of the size of a large filbert was found filled with pus. Here an inflammatory focus had developed into an abscess, which, gradually distending, found its way into the surrounding parts ; amongst others, into that which tolerates the least interference with its normal condition—the fourth ventricle.

Remarks.—To me, these three cases have been most instructive. I will refer first to the second case. I think I am quite justified in placing it amongst those of cerebellar disease, notwithstanding the absence of an autopsy. The extremely sudden nature of the death, the immediate arrest of functions of both heart and lungs, without any warning or without any convulsive symptoms, without the slightest interference with conscious sen-

sation—all taken together point at once to some equally sudden interference with the great centres of circulation and respiration. The disordered sensation, the tingling and formication which was present for about two hours preceding death, can be explained only by assuming that extravasated blood was creeping stealthily and insidiously around, or, it may be, along the medulla on its road to the floor of the fourth ventricle, compressing the motor and sensory tract without obliterating its functions. The mode of death with these last symptoms solved for me what previously perplexed me considerably. I read the symptoms somewhat in this way : A blood-vessel burst in the cerebellum, causing the obstinate vomiting ; it easily worked its way amongst the delicate leaflets of this organ, tearing asunder the sensitive membranes covering it. This caused the pain. The quiet enforced by the pain checked the extravasation until some effort or other accidental circumstance started it afresh, with a renewal of all the symptoms : blood continued to be poured out spreading in all directions, ultimately reaching the medulla and producing there the symptoms and result just described.

The third case being one of abscess ; in the absence of disease elsewhere, and also in presence of the fact that up to the time of his fall he was perfectly well, there is little doubt that this abscess is due to the inflammatory process resulting from the fall in which he must have injured his head. Here a very interesting point is brought out, showing the bearing of the anatomical relations of the part to the presence of disease or injury. We must remember that the brain is almost completely surrounded by a layer of fluid, upon which, as Hilton puts it, it rests as on a water-bed. This fluid exerts the usual physical properties of all fluids, in acting as a barrier to the transmission of vibrations from a solid substance covered with fluid to any other substance in its vicinity. There can be no doubt, were it not for this, few of us would reach manhood without impaired intellect, in consequence of pugilistic encounters of our schoolboy days. The brain, however, must have some solid support, where it will come in contact with the bony skeleton. On the orbital plates of the frontal bone the frontal lobes of the cerebrum fit closely and accurately. Behind, the cerebellum rests

on the occipital bone, only a small portion of which it actually comes in contact with. Possibly it is a knowledge of this fact, although it may not be an exact scientific knowledge, that causes would-be so-called scientific pugilists to strike behind the ear, if they can get a chance, and thus stun their opponent.

The results of an injury to the skull transmitted directly to those portions of the brain in such close contact with its bony supports was well shewn in a case which I had the honor of bringing before the notice of this Society about five years ago. One or two points in connection with the case will bear repetition now. The case was that of a man who, whilst under the influence of liquor, fell down stairs on the 10th August, 1880, his head striking the steps several times. He was brought into hospital, under my care, the same day. He complained of pain very little indeed. He died within ten days. I show you now, for the second time, his brain, hardened according to the usual modern methods. You will observe that on the under surface of the frontal lobes are several small extravasations. In the central portion of the white substance of the right frontal lobe is an extravasation the size of a walnut. On the left lobe of the cerebellum is a patch about an inch in length, in which there has been some loss of substance, the result of softening from recent inflammation. This part was adherent to the dura mater. It is this portion of the cerebellum that rests on the occipital bone. With the exception of a patch on the tip of right temporal lobe, all these hemorrhages are parts that rested directly on the bone, or parts in their immediate vicinity to which the vibrations which caused the rupture have been directly transmitted. A remarkable point is the very slight pain, notwithstanding the pressure of this large patch in the centre of the brain, confirming the well known fact of the insensitive nature of the brain itself: the slight pain that was present would be due to those extravasations which are external and pressing on the membranes.

The intense pain felt in my first case, during her short illness (less than ten minutes), is readily explained by the blood working its way between the membranes, these latter possessing sensitive fibres. Some such analagous condition, no doubt, was present in the intense agony of the second case.

In my first case, death was so fearfully sudden that but few practical conclusions can be drawn from it, further than what is self-evident.

In the other two cases, the continuance of the vomiting is worthy of attention. In both cases it was kept up long after the stomach had been completely emptied. The constant pain in the head, the intense restlessness, with this persistent vomiting, have been referred to by several writers as being invariably present in cerebellar disease. It was especially the *persistency* of the vomiting that caused me first to suspect cerebral disease in my second case. I think this same persistency would have been sufficient reason for my suspecting cerebral irritation of some kind in the third case sooner than I did, seeing that that symptom—that is, its persistency—is such a frequent accompaniment of cerebral mischief.

THE RELATION OF MICRO-ORGANISMS TO THE PUERPERA AND THE WAY TO MANAGE THEM.

By T. JOHNSON ALLOWAY, M.D.,
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(*Read by title before the Canadian Medical Association, at Chatham, September*, 1885.)

In speaking of the relation which micro-organisms bear to the morbid conditions which the human puerpera is in danger of, it is exceedingly difficult to avoid being to a certain extent prolix. The vital importance of the subject becomes impressed upon us more and more as we continue to devote our thoughts to it, and as we become aware of deaths occurring in our midst frequently, which we have every reason to believe should be preventable. And it is this latter fact which is weightiest of all in urging us on to investigate and add new ways of conducting the puerperium towards attaining a low fractional mortality.

One of the great questions of the day is *how to obtain this low mortality*, and another—probably the more difficult of the two—is *how to make the growing-up members of the profession convinced of facts tending toward toward this end?*

Up to a period of the world's history approaching the middle of the present century, it was not an uncommon occurrence for men to have had allotted to them during their individual lives a

number of wives varying from two to four. And we are told that the wives of these men for the most part died in childbed or from "some obscure internal disease" presumably connected with the organs of reproduction. On the other hand, it was well established that "old maids" never died. They became extinct as individuals through a process of gradual desiccation experienced in no other phase of nature. And I hold that until we can reduce the mortality of "wives" down to that of "maids" we will be wanting in our duty as faithful and determined investigators. Let us turn our backs upon expectancy, redolent as it is with the tenets of dark ages. I say this in much earnestness, because infectious puerperal disease has still its friends at court who are constantly disclaiming against such a wolf. They will tell us in open council they have never, in many hundreds of cases, seen one of septic fever; that they do not believe in antiseptic precautions; that the lochia is a healthy-healing medium (*sic*), and should not be interfered with; that it is meddlesome midwifery, and that the female genitals form a temple only for the gods to behold. I have before me a copy of the *Medical Age* (April 25th, 1884), in which there is an article on "Common Sense in Obstetrics," by "An Old Practitioner." The author says, "I never could muster courage enough to subject a modest woman to the indignity of making an ocular examination for a rupture, and I have never found it necessary so to do, Dr. Thomas to the contrary notwithstanding." The whole of this article, from beginning to end, is a good sample of many such as we see in medical journals of the present time. They are simply harangues of vicious invective against modern advance in gynæcic medicine, and are directed particularly against such men as Gaillard Thomas and his followers in antiseptics. They truly remind one of Bacon's definition of Fame—"*A gilded butt to be pierced by arrows of malignancy.*"

If these gentlemen of the pre-liberal age would only consider that there are many circumstances connected with their individual careers which would *seem* to justify them in leaving everything to nature, and that there are possibly circumstances connected with the lives of others not similarly situated which a like procedure would be most fatal to their patients and their own

reputation, medical editors would be spared the publishing of much matter which they cannot conscientiously endorse, and Thomas, in his endeavor to save life and benefit our race, would not sometimes feel with chagrin that he had been throwing pearls to "inappreciative mortals."

Between the years 1847 and 1880 no less than 164,446 deaths have been registered in England as the result of septic puerperal disease. This number does not represent the true facts of the case, as there must have been many such deaths not registered under this term. It has been said by physicians who lived at the beginning of the present century that they would as soon be called to attend a case of hydrophobia as one of puerperal fever. And, more recently, Dr. Stokes assured the Dublin Obstetric Society that in his experience of over forty years he had never seen a single instance of recovery from puerperal fever.

Fischel tells us that at Breisky's second clinic at Prague during the three years from 1879 to 1882 the mortality varied from 3.1 to .0 per cent. under various forms of prophylactic precautions. And Fischel concludes that the prevention and treatment of septic puerperal affections must be *local* and *surgical* in character.

Paul Bar, in his late work, tells us that prior to the year 1870 the percentage of deaths varied between 3.5 and 20.3 per cent., the rates being nearer the latter figure. After 1870, when Tarnier began to practice and teach antiseptics, the mortality began to decrease from 2.8 in 1871 to 1.1 in 1883. In Tarnier's pavilion, established in 1876, there was but one death in 88 cases. In 1877 and 1878, out of 204 and 237 deliveries respectively, only two deaths; in 1879, out of 189 deliveries, only one death; and since then up to middle of June, 1883, out of a total number of 785 deliveries *not a single death.*

In the year 1875, Battlehner of Karlsruhe reports 530 puerperal deaths from all causes in the Grand Duchy of Baden. After the introduction of antiseptic prophylaxis, the mortality sank in 1880 to 450; in 1881 to 380; in 1882 to 225; and an average of 56,000 parturitions, from 0.95 per cent. to 0.4 ent., or more than one-half.

In Dr. Macan's report of the Rotunda Hospital for 1883 there appears a most remarkably low mortality under strict antiseptic precautions. The pupils and nurses are required to wash their hands thoroughly in a solution of carbolic acid and then dip them in a solution of corrosive sublimate (1 to 1,000) before making a vaginal examination. The vagina is irrigated with an antiseptic solution before any post-partum operation is performed, and the uterus is irrigated afterwards with a solution of corrosive sublimate (1 to 2,000). The report states that under this practice, of 1,090 women confined during the year, 6 died, a mortality of 0.55 per cent. And the most noticeable fact is that *none* of these deaths were from septicæmia.

During the discussion on puerperal fever at the New York Academy of Medicine (1884), very startling facts were brought out by Dr. H. T. Hanks. He stated that he had obtained statistics from the Board of Health of New York City showing that during the past four years, out of 120,418 puerperal women, 1,005 deaths occurred from puerperal fever, or 1 death in 120 cases. And he expressed the opinion that, under such a state of things, the profession should be ready to accept any judicious change in the care of the puerpera which would promise better results for the future.

From these few statistical quotations, it will be seen that the mortality in childbed-fever has been gradually decreasing of late years; and as there must be a substantial cause for this improvement, it is fairly attributed to the gradually increased shedding of light upon the pathology of the puerperal state. From this it became evident that child-bed fever, in its fatal forms, was due to bacterial agency, and that a traumatic infective disease was the imprint of its nature. It is true that there are eminent writers, as Mundé and some others, who maintain that *all* forms of puerperal fever are not septic in nature. What this other form or forms are, is not stated; nor are we led to understand that such forms of the disease have received any reasonable proof which would militate against the fact that they are septic all the same. When a rise of temperature occurs during engorgement of the mammary glands, accompanied with some headache and increase of pulse, and controlled by a little aconite and a

purgative, the condition should not be spoken of as "puerperal fever," although its identity with blood infection is more than probable. I will but refer here, in a passing way, to the fruitless endeavors of the unhappy Semmelweiss to turn the stubborn heads of his colleagues on this point. The history of the subject in this respect is familiar to all. To Semmelweiss, the obstetrician, is due the credit of having first shown that patients dead of surgical blood-poisoning, died with the same symptoms as patients dead of puerperal fever, and that the post-mortem examination yielded similar morbid conditions in each. His strong conviction of the truth of these facts led him to adopt antiseptic measures with the well-known wonderful results. Some twenty years ago it was established by Rindfleisch, Birch-Hirschfeld and others that wounds, on becoming unhealthy, contained numbers of spherical bacteria, and that the unhealthiness thereof stood in direct relation to the number of these bacteria. The more abundant these appeared, the worse became the state of the wound and the general condition of the patient. The blood of patients dead of puerperal fever was examined and found to contain bacteria in large numbers. In some of these cases it was also noted that small metastatic deposits occurred in the organs and tissues generally, and that these deposits were largely composed of minute organisms. These were cases of true pyæmia, and in no way differed from those dead of that disease under the care of the surgeon. In these pyæmic deposits bacteria generally appear in colonies or zooglæa. The channel by which these passed from the original source to form metastatic foci was shown by Klebs to be through the interspaces of the cellular tissues, and that this takes place either with or without the aid of wandering lymph corpuscles. They also travelled by means of emboli from thrombi situated in veins. Often in this manner septic organisms will pass along the blood-current unharmed as regards their vitality and power of settling in some distant organ or organs which have suffered injury sufficient to weaken their power of bacterial resistance. We know that micro-organisms cannot live in healthy living blood. They may enter it by escaping from the original wound-infection seat, but so long as the vitality of the blood is high, and there is no diminished resistance, these organisms

become enfeebled and ultimately die outright. If, however, on the other hand, the vitality of the individual is of a low grade, and the resistance to bacterial life is diminished, these organisms will gradually accumulate in the blood and tissues. They will increase rapidly now, where they found no footing before, and the more prosperous and luxurious they became, the more will the failing vital powers of the patient become evident. The organisms will continue to multiply and form small groups that increase in size until they are too large to pass through the capillary network. In this way they are caught and detained in the lungs, liver and other parts; and, still continuing to grow, form duplicates of the original wound-infection and supply the blood with their ptomäine poison. These metastatic foci of infection find the soil in which they become located suitable for their continued existence and growth, and form a stage of the disease known by the term *pyæmia.*

Micro-organisms, however, do not always act in this way. We know that much depends upon the dose, virulence of the organism, susceptibility of the patient, structure of the organ invaded, and other circumstances. Koch has experimentally proved that a very large dose of putrid blood will cause rapid death, with symptoms like those accompanying death from a narcotic poison. In these cases no organism whatever is found in the blood, and very little alteration of tissues is found at the seat of injection. The animal, in fact, dies from the effects of an overdose of a chemical poison before the infected micro-organisms had time to enter the blood in any appreciable numbers. Moreover, the blood from this animal so killed did not have any effect whatever on another animal when injected under its skin. Here we have a profound poisoning by ptomäines generated by the micro-organisms injected, and the animal dies showing no post-mortem evidence of secondary metastatic deposits. If, however, a smaller quantity of putrid blood be injected, the animal, say a mouse, shows much less marked symptoms of poisoning, and, in fact, they are quite absent when a very small quantity is used. If, from those animals, however, which die after this small dose, a small quantity of blood or subcutaneous fluid from seat of inoculation be taken and injected into another animal, it will die of

precisely the same symptoms. This can be continued through a series of any number of like animals, with the same results. The post-mortem examination of these animals shows the blood to contain large numbers of very small bacilli. Koch, Davaine and others called this disease *septicæmia.*

By this statement it is not meant that because the mice septicæmia of Koch is due to the presence in the blood of very minute *bacilli*, that these are also present in the blood of human beings dead of that disease. In fact, the contrary will be found to exist, in so far that bacilli are not by any means the predominating bacteria in man septicæmia, but that micrococci are the pathogenic organisms here, as in the septicæmia of rabbits. The question now comes before us—In what relation stand microorganisms to the septic process going on in the infected animal? Is the damage caused by their mechanical irritation, or by the irritation and lethal effect of a material generated by their reproduction and growth? Bearing upon this point, I remember seeing, in consultation, a young woman, in the hot summer weather of 1883, at the village of St. Henri. I found her lying upon her back in an insensible condition. Narcosis was as profound as if she was under chloroform. Temperature 105°; pulse 130. Her special senses were obliterated. She could not be aroused. The stench of putrefying blood was simply horrible. The windows were thrown open, and she was ordered to be sponged with a carbolic solution until clean, and then removed to another room for examination. During this operation I obtained the history from her medical attendant as follows: She was confined three weeks previous to my visit. On the tenth day she left the house and walked to the next street corner and back. She shortly afterwards felt considerable pain in the pelvis and abdomen, which was followed by a very profuse discharge of blood. The pain ceased in a few days, but the discharge continued free, and was not allowed to be interfered with lest the patient should *catch cold.* The result was that days of accumulated blood under the patient was allowed to remain and decompose, and form a beautiful culture medium for the various microorganism deposited there. These followed the vaginal canal to the cervix, which was extensively lacerated, and thence upwards

to the still unrepaired placental site. Here we had a terrible state of things. I found the whole pelvic cellular tissue set in one mass of inflammatory exudate. And it occurred to me that here in this human subject was a case which bore a strange relationship to Koch's experiments with chain-like micrococci upon the field mouse. The lacerated cervix and unhealed placental site were inoculated with decomposing blood containing masses of micrococci. They invaded the blood and lymphatic vessels of the parts, generated ptomäines, which set up an extensive phlegmon of the whole cellular tissue of the pelvis. Constant absorption of this poison was being carried on until the nervous centres became so saturated, and their function interfered with to such a degree, that impending death became apparent. The only existing difference between the case of this woman and that of Koch's field-mouse was, that in the woman's case the influence of the organism was not sufficiently powerful to utterly destroy the cellular elements of the tissues invaded; in the case of the mouse it was, and gangrene ensued. The organisms had, however, the effect of forming a barrier to further extension of the disease beyond the pelvic tissue. And although these micro-organisms exert so baneful an effect upon animal life when they get a footing in injured tissues of a fitting soil, they also form a limiting barrier to the spreading of inflammatory and suppurative disease, which would otherwise become general and rapidly fatal. In the case just related we had the inflammation set up by ptomäines generated by the micrococci in the decomposing blood. The organisms, in their turn, walled in the field of inflammation; but absorption of septic poison into the general circulation was being rapidly pushed on to almost complete extinction of the vital powers. This woman underwent treatment of which I shall speak further on, and recovered. And I firmly believe if Koch's animals had been experimentally treated on similar principles shortly after their inoculation, death would not in these cases have ensued.

In regard, then, to the *rôle* which micro-organisms play in the septic phenomena, it would appear that they stand as the first link in the chain of causation—in fact, it would be more correct to say that that chain had but one link, and that the phenomena

arising therefrom were but expressions of malign influences coming from this focus. Take away this focus and the septic phenomena cease to exist. Ogston has pointed out to us that there is no such condition as septicæmia or pyæmia *per se*. *We must have a traumatism*, whether that be in the form of an inflamed wound or an inflammation of seeming spontaneity, it matters little. And it has always appeared to me that, next to the mangled parts in a bad railway accident, there can be no more fitting traumatism as a culture-ground for micro-organisms than the mutilated passages of the puerpera.

Let us now take, in illustration, a puerperal patient with the usual wounds in her parturient passages, and that it is understood that there is a possibility of her becoming a subject of infective disease; that her wounds are the same as other traumatisms, and liable to the same dangers. *What, now, are the conditions leading to the infection of the wounds in question? What are the most rational means, according to our present knowledge of these dangers, to be adopted in prophylaxis?* It is universally acknowledged that certain septic and pathogenic micro-organisms surround our patient, and, if left undisturbed, are capable of setting up putrefactive changes in wounds exposed to their influence. It is also well known that when albuminous fluids, such as blood, meat infusion. and such like products, are exposed to the air for a certain time they become putrid, and that on microscopic examination they are found to contain every variety of micro-organism. That amongst the legion of different species of micrococci and bacilli occurring in these fluids, the great majority of them are quite harmless. When they are introduced into the body of a healthy animal they are unable to grow or multiply, and therefore are unable to produce any disturbance whatsoever. But some few species there are which, although growing and thriving in ordinary putrid substances, possess the power, when introduced into the body of a suitable animal, to set up a specific disease. Our best examples are the bacillus of anthrax, the micrococcus of erysipelas (so much studied in this respect by Fehleison), the tubercle bacillus of Koch, also the bacillus of swine plague. Davaine's septicæmia of rabbits, Koch's septicæmia of mice, and so on, cannot be produced by

every putrid blood or putrid organic fluid, only by some, only now and then—*i.e.*, when the particular micro-organism capable of inducing the disease is present in those substances, and then only when it finds access to a suitable animal. Davaine's septicæmia of rabbits and Koch's of mice cannot be induced in guineapigs. Anthrax cannot be induced in dogs, and so on with other pathogenic organisms. These pathogenic or specific organisms have the power of growing and thriving in the animal tissues *ab initio*. Those which do not possess this power—the non-pathogenic—cannot acquire it by any means whatever. Many are familiar with Koch's and Klein's criticisms of Buchner's experiments in endeavoring to prove the change of the non-pathogenic hay bacillus into the pathogenic anthrax bacillus, and how Buchner's error occurred through accidental air contamination. That Klein proved it was as imposible as to convert the bulb of the harmless onion into the bulb of the poisonous colchicum. There is also instanced the case of the so-called jequirity bacillus, as proving the conversion of a common septic into a pathogenic organism. This was proved to be more absurd than the hay and anthrax bacillus story, as it was shewn that the morbid condition set up in the eye by the introduction of an infusion of jequirity bean was due to the fact that in this infusion certain active principles existed, closely allied in nature to albumen, in which the common septic organisms in the surrounding air formed a special nurture medium to grow and multiply in. It is, however, with the common septic organism we have to do chiefly in connection with the febrile condition met with in the puerpera; and it is to these I will draw attention.

Many observers have shown that by putrefaction of animal substances a substance can be obtained—sepsin—which can be isolated by a chemical process destructive of every living organism, and which, on injection into the vascular system of animals in sufficient quantities, produce marked febrile rise of temperature, and is capable of causing death with the symptoms of acute poisoning. Lister has shown that under careful antiseptic dressing of wounds, putrid intoxication, as well as septicæmic infection, does not at all occur. From experiments of this nature on

lower animals, we can easily find analogy in those rapidly fatal cases of intense septicæmia occurring occasionally in the much-neglected puerpera, and in some cases of death after abdominal section. These septic organisms differ from pathogenic organisms in some important respects. They require for their support and thrift much less complex substances to live in—almost any animal or vegetable fluid. They also differ from pathogenic organisms in the very essential respect that they absolutely refuse to grow in the *living tissues of the living animal*. During the life of the patient should any part, such as the parturient tract, become necrotic from severe injury, or so severely changed, by inflammation or otherwise, that the part involved becomes practically dead, then that part becomes packed with masses of micrococci, and here these organisms find a suitable nidus for growth and multiplication. They may, in extreme cases, also be found in other organs distant from the original seat of injury, but it will be found that death has been so rapidly approaching, and the general disorder has been so severe, that these tissues have begun to lose their vitality, and therefore their power of resistance to the invasion of these septic organisms. The question may now be asked—Where do these organisms come from which are thus capable of settling in remote tissue even during the ebbing life of the patient? In the case of the intestinal wall and abdominal organs generally, there can be little doubt but that they immigrate from the cavity of the bowel, where they are normally present; nor do I think there can be a doubt in the case of a secondary pneumonia or inflammation of serous membranes during a neglected case of septic metritis. It is not difficult to understand that when products which form a nidus for these organisms become taken up by the general circulation, they act as emboli, and thus set up secondary inflammations in distant organs. These organisms, although unable to travel through the living blood unprotected, can, under the protection and cover of these emboli, be carried carefully to distant regions and there deposited, retaining their full vigor and vitality. But when found in these organs, it does not follow that they orignated there, but are simply the result of transportation from parts which

have direct access to the outer world. We have this fact exemplified in the puerpera; the lochial discharge is charged with micrococci from the very first day after delivery. This fact I have demonstrated many times myself by examining the lochia microscopically at various periods during the puerperium, and have never failed to find the specimen well filled with micrococci. These organisms must, to some extent, find their way into the blood, but being unable to resist the living healthy blood they die at once and are no more heard of. But let these very organisms reach, under protection, an organ in which the balance between health and disease has been disturbed by excessive functional activity or otherwise, and the result will be different. It has been pointed out by Ogston that acute suppurative mastitis occurring in neglected puerperal patients was due to immigration of micrococci, and that the reason they settle in the breasts was on account of those organs being in a state of high functional activity approaching congestion. This I have noticed myself, and it has been evidenced to me by the fact that I have never seen an acute suppurative mastitis since I began the practice of proper vaginal irrigation; whereas prior to this, mammary abscess was by no means an uncommon occurrence. As an offset to these teachings, it may be said that the healthy blood has been found to contain minute organisms normally, and that under conditions they can be deposited in certain organs to set up mischief. This theory has now been admitted to be utterly unfounded, and it has been distinctly proved that the living blood contains no organisms whatever; and that the error in this respect arose from accidental contamination. As we have now seen somewhat of the relation of micro-organisms to the puerpera, we will turn our attention to the means of managing them.

(*To be continued.*)

THE "MEDICINE-MAN,"

Or Indian and Eskimo Notions of Medicine.

A paper read before the Bathurst and Rideau Medical Association, Ottawa, 20th January, 1886.

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(*Continued from p.* 462.)

The great majority of their medicines are vegetable, but some are derived from animals, as the beaver, the musk-rat, the skunk, the deer, toads, snakes, insects, etc., while others are mineral, as iron pyrites, gypsum, salt, ochres, clays, ashes, etc. Parts of rare animals, impossible to obtain at the time, may be prescribed as the only means of saving a patient, who appears sure to die in any case. One of the most curious preparations in use amongst them is the "black poison," the effects of which are well known around the lakes of the Winnipeg basin and in the Swan River district. Some time after administration, it changes the color of an Indian's skin from brownish-yellow or copper-color to a sooty black, at the same time causing hair to grow on unusual parts, especially in an Indian, as on the cheek bones, etc. Its first effects are sickness, headache, and pains in the back and limbs. Afterwards, ulcerative sores break out in various parts of the body, chiefly over the joints, more particularly the knuckles. I have tried in vain to ascertain the composition of the "black poison," or to obtain a specimen of it. I have been told by a person who professed to have seen it, that it is a brown snuff-like powder, with a slight and rather sickening smell. A small quantity administered in food appears to be sufficient to produce the above effects. One victim, Peter Brass of Fort Pelly, informed me that it was given to him, unperceived, mixed with a dish of berries. I have heard it stated that it manifests its properties if smoked with tobacco, but this seems doubtful. It is said to be derived partly from a plant which does not grow north or east of Lake Winnipeg, possibly the poison ivy, *Rhus toxicodendron*. It is also said to contain the dried acrid matter from glands in the skin of the toad.

Although the medicine-man may have a considerable knowledge of the properties of many medicinal agencies within his reach, he depends, for the removal of disease, more on sorcery, beating the tom-tom, singing, etc., than on the efficiency of drugs. I have seen a miserable sick Indian, fresh from the hands of the medicine-man, with his poor body all painted with figures of tortoises, fishes and other creatures, in order to cure him of some internal trouble. A great medicine-man will not condescend to diagnose a case by the tedious process of examining the patient and asking questions. He is supposed to know all about it without going into these details. An English doctor told me that once when he was examining a sick Indian, to his surprise, neither the man himself nor his friends took much interest in the process. After answering a few questions in a sullen manner, they exclaimed, "We thought you were a doctor."

When an Indian becomes really sick he yields to his weakness, gives himself up to die, and is the most abject of creatures. The drumming on the tom-tom seems to rouse him a little, and to keep up his courage. An Indian canoeman once fell sick on my hands, and obliged me to stop my journey and stay in camp for two or three days in order to nurse him. He secretly sent word by some friend to bring a reputed medicine-man who was then camped at a considerable distance away. I was treating him as well as circumstances would permit with the aid of a small assortment of medicines which I had along with me. He was about well, and able to resume work the following day, when the medicine-man arrived late in the evening, after I had turned into my blankets. He and the friends who had come with him made the night hideous with their tom-toms and the monotonous "hi-ya, hai-ya; hai-ya, hi-ya"! But as they had great faith in it, I did not interfere. Going over to my patient at daylight, I enquired how he had stood it. He replied that he was now quite well, that the medicine-man (who, by the way, was sleeping triumphantly close by) had driven off the spirit of his sickness, that it was now far away, and he was ready for work again. He did not recognize that he had to thank either myself or nature for the cure.

The Indian doctors do not understand the nature of delirium.

When a patient becomes delirious, as in fevers, etc., they say he is about to "turn windigo"—that is, to become possessed of an irresistible desire for cannibalism. It was then the doctor's duty to knock the patient on the head. Many a life has been sacrificed in this way.

Midwifery is completely ignored by the great medicine-man, as beneath his dignity, and it is left entirely to the female doctors. A profound knowledge of obstetrics is seldom called for, as parturition is generally extremely easy, owing, principally, to the comparatively small size of the infant's head. Delivery is effected by placing the patient on her hands and knees on the ground, and supporting the abdomen by the hands of the accoucheuse.

In surgery, the medicine-men confine themselves to setting bones, dressing wounds and ulcers, and alleviating pain by any means in their power. They never attempt any grave operation, although their general knowledge of anatomy is not to be despised. They resort to cupping by means of sucking-tubes. They sometimes bleed by opening a vein in the arm with a sharp chip of flint. I have some evidence, in the shape of relics discovered in mounds, which leads me to think that certain of the ancient Indians had a better knowledge of surgery than those of the present day.

The sweat-bath is in universal use. In preparing for a race, or any other great muscular effort, they sometimes anoint the body and have the muscles kneaded by a friend after taking one of these baths.

The wild Eskimo appear to suffer from fewer diseases than Indians or whites. Among those of Hudson's Straits, notions of medicine are, as far as can be learned or observed, more crude and primitive than among the Indians. They also have a class of medicine-men whose pretensions to perform all kinds of miracles are of the most extravagant character. They appear to deal almost entirely in the supernatural, and to make little use of medicines. They have no hesitation in declaring to their own people that they can cure all kinds of disease and prolong life indefinitely, if they only choose to do so. They account for their own death by saying

they wish to die, or that they are overcome by a still greater, but unseen, medicine-man. They say they can and do make themselves larger or smaller at will, or change themselves into some other animal, or enter into a piece of wood or stone ; that they can walk on the water or fly in the air ; but there is one indispensable condition,—no one must see them. They find themselves powerless to perform these miracles if anyone is looking on. I was once called to prescribe for a noted medicine-man on the Eastmain coast of Hudson's Bay, who had accidentally shot himself through the abdomen, and was suffering from peritonitis. All his pretensions had vanished, and he was most anxious to live. When one of these doctors visits a patient, after ascertaining the seat of the disease, he will rub and blow on the part and then withdraw his hand slowly and as if with difficulty, in order to show that he is hauling out a heavy weight of pain ; at the same time he looks upward, rolls his eyes, and groans. Having pulled the disease out of his patient's body, he throws it away with a great effort, muttering some imprecation, after which he breathes more freely and looks for his fee, immediate payment being required by their rules of etiquette. Some of the Eskimo women profess to be doctors. They have a few minor surgical appliances, and they alleviate the pains of rheumatism, scurvy, sprains, etc., by rubbing or manipulating the parts affected. But their chief mode of cure is by stroking the body with an air of mystery while repeating charms. The doctor is generally accompanied by other women, who join in the choruses of the charms.

The following are some of the plants used medicinally by the Outchipwai Indians :—

Acorus calamus, sweet flag or "fire-root," as infusion or in powder, or it may be chewed whole, for colds and flatulence.

Nuphar advena, yellow pond-lily, as a tonic and for poultices.

Abies alba and *A. nigra*, spruce. The fresh inner bark is beaten to a fine homogeneous pulp to form astringent poultices for healing obstinate sores. Dr. Mathews of York Factory states that a decoction of the leaves or spray is used internally for scurvy and externally for rheumatism.

Abies balsamea, the balsam tree. The clear liquid "gum" from the blisters is applied freely to fresh wounds, and a decoction made from the bark is taken in large doses for diseases of the chest.

Salix and *Populus*. Decoctions of the bark of both willows and poplars are taken as bitter tonics and in fevers. Dr. Mathews informs me that the Indians of York Factory find a powerful astringent in one of the dwarf or creeping willows; also, that they drink an infusion of the bark of the grey willow, a small tree of that region, for rheumatism.

Lonicera ciliata, honeysuckle, and *Ribes rubrum*, wild red currant. The stems and twigs of these two shrubs are tied into bundles and boiled together in a comparatively small quantity of water; the strong decoction is taken in large doses for diseases of the bladder.

Juniperus communis, juniper. The Indians, generally, know the diuretic properties of the berries. In some parts of the country the stems are boiled and the inner bark beaten to a pulp to form poultices for foul sores.

Ledum latifolium, Labrador tea. A decoction of leaves and flowers is used for diarrhœa. A weak infusion is sometimes taken as a poor substitute for tea. The chewed leaves are applied to wounds and skin affections. Dr. Haydon, who resided six years at Moose Factory, says a decoction of the leaves or flowers is used in which to boil clean rotten wood of the white birch, which is afterwards dried, pounded and sifted. The powder is used as a remedy for chafing and to dust new-born infants. He considers it a useful application.

Cornus circinata, *C. sericea* and *C. stolonifera*. An infusion of the bark of any of these dogwoods is taken in moderate doses for diarrhœa. A decoction of any of them in large doses is reported to be emetic. In small doses, the decoction is taken for fevers, colds and coughs. The bark dried quickly at the fire is used to smoke, either alone or mixed with tobacco.

Iris versicolor, blue-flag. The dried root in powder is used as a cathartic.

Prunus Pennsylvanica, pigeon cherry. A decoction of the

bark is employed as an invigorating tonic in debilitated states of the system.

Pyrus Americana, mountain ash. A decoction of the young shoots is used as a tonic, and also, according to Dr. Haydon, for pleurisy, or what appears to be this disease from the symptoms they describe.

Mentha Canadensis, wild mint. The infusion as a carminative.

Prunnella vulgaris, self-heal. Said by Dr. Haydon to be chewed for sore throat.

Polygala senega, snake root. The word senega is one of the varieties of the Outchipwai name for this plant, and means yellow-root. It grows principally in very calcareous soils, and is not found beyond latitude 52° in the region north of the great lakes. It is highly prized by the Indians, and is used by them in inflammation of the lungs, colds, coughs and sore throats.

A knowledge of the medicinal properties of the plants of the region I have referred to might often prove valuable. In distant travels in this northern wilderness the stock of medicines which one can take with him is necessarily very limited, or one may chance to have none at all. In case of emergency, it is therefore desirable to know the virtues of the native plants, always at hand, in order that one may make the most of them in the absence of more powerful remedies.

The Eskimo, who live entirely on raw animal food, appear to regard any edible vegetable substance as medicine. They eat with great relish the northern blueberries and cranberries, and where they cannot get these, they take the leaves of the dwarf willows, a plant of the parsley family, called "scurvy-grass" (*Ligusticum*), and almost any kind of sea-weed. On the shores of Hudson's Straits they collect and eat the starchy roots of *Polygonum viviparum*, which grows there in considerable abundance. It is a singular circumstance that, notwithstanding the sameness of their food, and the fact that they never wash either their bodies or their clothing, the Eskimo appear never to be afflicted with scurvy, whereas white men, under a similar regimen, would be almost certain to be attacked.

REPORT ON PHARMACOLOGY AND THERAPEUTICS.

By JAMES STEWART, M.D.,
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THE ACTION OF ERGOT.

Prof. Kobert of Dorpat has discovered the following substances in ergot of rye: Two acids, ergotinic and sphacelinic, and a glucoside to which he gives the name of cornutine.

Ergotinic acid administered to pregnant bitches, rabbits, cats and sheep even in the largest doses, do not give rise to any uterine contractions. After very large doses, the blood-pressure falls very low, and as a consequence, the young die, but are not expelled. From these experiments, it is concluded that the ecbolic power of ergot is not owing to ergotinic acid.

He found that cornutine produced uterine contractions in both pregnant and non-pregnant animals, but with this difference, that in the latter the contractions are accompanied by vomiting, diarrhœa, salivation and irregularity of the pulse. In pregnant animals, uterine contractions are induced by doses insufficient to produce the latter symptoms. The doses necessary to induce stimulation of the uterine muscular fibres in the non-pregnant bring about such a serious general state as is apt to be fatal. This is not the case in pregnant animals.

Dr. Kobert found sphacelinic acid to act very powerfully on the pregnant uterus of the lower animals, without giving rise to any dangerous symptoms. The contractions that it produces are tonic, while those of cornutine are clonic. Cornutine acts by directly influencing the centre in the spinal cord for uterine contractions, while sphacelinic acid acts directly upon the uterus itself..

To obtain the full uterine effects of ergot, it is necessary to use a preparation containing sphacelinic acid and cornutine, but no ergotinic acid, for the latter has a very injurious action on the stomach and circulation, and no effect on the uterus. This can be done by bruising the fresh ergot and extracting with strong alcohol. The active uterine principles are soluble in this menstruum, while ergotinic acid is not. This alcoholic extract

does not, however, retain its active therapeutic properties for a longer period than twelve months. It should, therefore, be prepared from fresh ergot every twelve months. This extract, according to Kobert, is just as efficient in contracting the arterioles and thus arresting hemorrhage, as it is in stimulating the pregnant uterus.

ON THE USE OF COCAINE IN THE OPIUM HABIT.

From numerous physicians we have had favorable reports lately of the beneficial influence of cocaine in the opium habit. All who have had to do with these patients will gladly welcome any means that will aid them in their treatment. The attempt to cure the opium habit very frequently fails, unless compulsory confinement is resorted to. It is often a question of great delicacy to decide whether it is best to suddenly remove the opium or to allow the patient to continue it in diminished quantities until such time as the damaged nerve centres regain their normal condition. The sudden removal of the accustomed stimulus is apt to be followed by great depression of the circulation, which may be very serious. On the other hand, success is seldom obtained unless this measure is resorted to. In cocaine we have an agent that, in small doses, acts as a cerebral stimulant, this action closely corresponding to the primary effect of opium on the higher nerve centres. If we can make use of cocaine to bring about only its cerebral stimulant action, we obtain effects which will tide the patient for a short time over his most trying period; that is, for the few days succeeding the withdrawal of the opium.

Obersteiner of Vienna has had very gratifying results with cocaine when used in the method above noted in a number of cases of morphianism. The cocaine treatment in these cases requires to be carried out with the greatest possible care, otherwise we may bring about a cocaine habit which, if all reports be true, is even worse than that of opium. In large doses, cocaine causes marked cerebral depression, a veritable cerebral neurasthenia. Even cases of insanity have been reported from its too frequent and long-continued use. It should not be continued for a longer period than a week without an intermission. The dose necessary to bring about the stimulating, without any of

the subsequent depressant effects, cannot be determined exactly beforehand. Each case must be carefully tested to ascertain the appropriate dose. Ten minims of a four per cent. solution of the hydrochlorate of cocaine may be considered a fair dose for an average adult.

HYPNONE AND URETHAN—TWO NEW HYPNOTICS.

We owe to the researches of modern chemistry two agents which promise to fill important places in the lists of the hypnotics. These are *hypnone* and *urethan*.

Hypnone has received this designation on account of the inconvenience there would be in using its proper chemical name (phenyl-methyl-acetone). Hypnone is a liquid at 20°C., and boils at 198°C. Its specific gravity is about 1.020. It is insoluble in water, and has an odor resembling cherry-laurel water. In doses of from three to five drops it generally causes a deep sleep, closely resembling the deep and dreamless sleep usually following chloral hydrate. It has been administered by Dujardin-Beaumetz and Bardet to a number of patients with satisfactory results. They did not notice any dangerous or even disagreeable effects in any of their cases, with the exception that the acetone, into which it is partly decomposed, gives rise to a peculiar odor of the breath. Administered to the lower animals, it acts as a powerful hypnotic in very small quantities, while larger doses produce death, the animal dying comatose. In guineapigs, the dose necessary to produce sleep is very frequently also a fatal one, death being due generally to paralysis of the respiratory centre. It brings about its hypnotic action when inhaled more readily than when given by the stomach. It is recommended to be administered in capsules mixed with a little glycerine. It is too soon to decide how it will compare with chloral and paraldehyde.

URETHAN.

Chemically, this substance is an æthylic ether of carbonic acid, and consists of white crystals freely soluble in water. It has a peculiar, but not unpleasant taste, and is free from odor. The action of this agent has been experimentally investigated in the lower animals by Prof. Schmiedeberg of Strasburg, and

in man by Prof. Jolly and Dr. V. Jaksch of Vienna. In doses of 16 grains (1.00) it nearly always produces a sound and deep sleep. As its action is almost entirely on the cerebral centres, it has no effect in allaying peripheral irritations. It consequently can exert no influence in allaying the pains of neuralgia or troublesome coughs. The sleep induced by it closely resembles physiological sleep in its character and duration. The patient, on awakening, does not experience any unpleasant effects.

Schmiedeberg recommends it to be given in small doses, frequently repeated, rather than in one single large dose, as he has found that it is apt at times to give rise to vomiting. Urethan has no injurious action either on the circulation or respiration. On the respiration it acts rather as a stimulant. It possesses advantages here over paraldehyde, which, in other respects, it closely resembles in its physiological action, paraldehyde having a depressing effect on the respiration.

Dr. Myrtle of Harrogate, in the *British Medical Journal* for February 20, 1886, gives the result of his experience of urethan in fifty cases. These cases were those of everyday practice, where a hypnotic is commonly given, as general restlessness, sleeplessness, neuralgia, and certain forms of skin affections with great irritation. He instances the case of a gentleman who had suffered from insomnia for weeks, and who could not take either opium or chloral. Fifteen grains of urethan produced a most pleasant and refreshing sleep. The patient awoke without headache or any other disagreeable symptom; no nausea, flatulence or constipation. Given in gout and rheumatism, Dr. Myrtle found it to act very efficiently, presenting the advantage over morphine of not interfering with the action of the bowels or kidneys.

In a future report it is the intention to deal more exhaustively with the whole class of hypnotics—a class of agents which, in their proper sphere, are certainly valuable, but which very frequently are simply prescribed at random. The whole subject of sleeplessness is one requiring the closest investigation before deciding on any medication. Not unfrequently the origin of it is so obscure that it is extremely difficult to institute a scientific treatment. That hypnotics may do much harm is an almost

daily experience. It will be the aim, in the forthcoming article, to give the latest information on the different agents possessing hypnotic properties, and at the same time to indicate where and how they are to be used.

Correspondence.

New York, March 19th, 1886.

It would seem as if events of great moment always go in company. In this city, within the past few weeks, two great lights in the medical profession have been extinguished forever. The death of Dr. Alfred C. Post was followed shortly by that of Dr. Austin Flint and Dr. Vanderpool, ex-President of the Medical Society of the County of New York. Dr. Vanderpool had reached a good old age, and was held in high respect and esteem by the members of the profession in this city, as well as by a large and influential *clientéle*. On the night of the 13th inst. Dr. Flint was stricken with apoplexy, and lingered unconscious until seven o'clock next morning. The deceased was born in Petersham, Mass., on the 20th of October, 1812, and belonged to a family of physicians, his father, grandfather and great-grandfather being members of the profession. He received his collegiate education at Amherst and Cambridge, and was graduated as M.D. at Harvard in 1833. For the first three years after graduation, Dr. Flint practised in Boston and Northampton, and then established himself in Buffalo. In 1844 he was appointed to the chair of the Institutes and Practice of Medicine in the Rush Medical College, Chicago, but this position he relinquished at the end of a year. The *Buffalo Medical Journal* was founded in 1846, and during the ensuing years he conducted it with marked ability and success. In 1847 he was associated with Professors White and Hamilton in the founding of the Buffalo Medical College, an institution in which, until 1852, he was Professor of the Principles and Practice of Medicine. In the latter year he was appointed to the chair of Theory and Practice of Medicine in the University of Louisville, a professorship that he retained until 1856, when he resumed his connection with the college at Buffalo as Professor of Pathology and Clinical Medicine. The

winters 1858-59, 1859-60, 1860-61 he passed in New Orleans, holding the positions of Professor of Clinical Medicine in the Medical School and Visiting Physician to Charity Hospital. In 1859 he removed from Buffalo, establishing himself in this city, where he afterward remained. He was appointed in 1861 one of the physicians to the Bellevue Hospital, and Professor of the Principles and Practice of Medicine in the Bellevue Hospital and Medical College, having previously been appointed Professor of Pathology and the Practice of Medicine in the Long Island College Hospital. He resigned the latter position in 1868. In 1872 he was elected President of the New York Academy of Medicine. He was elected President of the American Medical Association in 1883, and presided at the meeting held in Washington, D.C., in 1884. He was also selected as President of the International Medical Congress to be held in Washington, D.C., next year. His productions are too well known to require enumeration here.

There have been few men in the profession who have been held in so high esteem and reverence by his *confréres* as Dr. Flint. In him were combined all the qualities of a good and great man. He never grew old in his ideas, always keeping abreast of the progress in medical science, and was among the first on this continent to accept the signification of Koch's great discovery—the tubercle bacillus. He had been attending to his many duties up to the day of his death. The writer of this letter had occasion to meet him in consultation a few weeks ago. The consultation was to take place in Dr. Flint's office at an appointed hour. Having had a patient in his office who was detaining him a few minutes, the old doctor came out into the waiting-room punctually at the appointed hour, excusing himself and saying that he would be disengaged in a few minutes. The patient, on having her chest examined, said, "Doctor, I feel very nervous." "Well, we will try not to make you more so," was the quiet and reassuring reply. During the consultation that followed, the attending physician was made to feel that he was the consultant and his advice solicited rather than that advice was imparted to him. This faculty which is so difficult to describe, and which is equally difficult to cultivate, may, in part, explain why Dr. Flint

was so admired and loved by all who came into contact with him. At the meeting of the Academy of Medicine last night the death was formally announced, and it was a point appreciated by all present when the President, Dr. A. Jacobi, said that he would do himself the honor to serve as memorialist of Dr. Flint. This came with the better grace, as it was well known that there had been many passages of arms between the two leading champions of the "old code" and the "no code" systems, which, as stated in my last, was probably the cause of Dr. Flint tendering his resignation to the Academy of Medicine.

An important paper entitled "*Limitations in the value of glasses for the improvement of vision*" was read by Dr. D. B. St. John Roosa before the New York Academy of Medicine on the 4th inst. After giving a short historical sketch of the introduction of the ophthalmoscope into ophthalmology, the reader of the paper said that a large proportion of eye cases coming into the hands of the specialist were those of error in refraction. Of 39,837 ophthalmic cases treated in the Brooklyn Eye and Ear Hospital in seven years, 4,570 or 10 per cent. were diseases of refraction and accommodation. Of 18,598 of the same class of cases treated in the Manhattan Eye and Ear Hospital, 1,991 or 11 per cent. were of the same kind. Donder's famous work was largely quoted from to show that the correction of hypermetropia by convex glasses will not always cure the attending asthenopia. The author did not undervalue the benefits to be derived from the correction of sight by suitable glasses in certain nervous symptoms, but he thought that this idea was driven too far at the present day. The clinical records of 15 cases were related to illustrate the class of cases that were benefited by glasses and those that experienced no improvement by such treatment. "Uterine asthenopia, or the asthenopia so often found in women suffering from serious uterine disease, I have never been able to materially alleviate. Neither have I seen any benefit, other than very temporary, in the correction of trifling errors of refraction in neurotic hysterical subjects, nor in the weakness of ocular muscles, so often one of the early symptoms of locomotor ataxia." The reader of the paper, himself a specialist of great renown, in his closing remarks, sounded a note much

unheeded in the present period of fashionable specialism. The eye was not to be looked upon as an organ apart from the body, or the point of departure of the most varied forms of disease. The remarks are well worth quoting: "A narrow specialism will never find any comfort in the study of the woes of the human body. The various causes of disease are too complex and concealed in very many, if not in the majority of cases to be found in the abnormal condition or action of one organ, while the correction of errors of refraction and accommodation, and the unburdening of overloaded ocular muscles, will do much to alleviate the asperities of human existence, these things are not as yet a panacea even for neuroses, much less for inflammatory diseases. In our hopes for cure in employing these methods, we will still require to avoid skepticism on the one hand and excessive confidence on the other."

The hydrophobia scare to which I referred to in my last letter has been transformed into a *fiasco* by recent developments. The origin of the scare, which the local press took every means for spreading, arose in Newark City, New Jersey. A supposed rabid dog had bitten several children and dogs on the 2nd of last December. The mad dog was shot, and of the bitten dogs six were discovered and kept in close confinement under veterinary supervision by order of the Newark Board of Health. Four of the children that were bitten by the dog were sent, through the generosity of Dr. Gorham and several Newark citizens, te Paris to be treated by Pasteur. The two other children that were bitten by the same dog remained at home. A very readable article on Pasteur's method of treating the children in Paris is to be found in the *Philadelphia Medical News* of 25th January, by Dr. F. S. Billings, who accompanied the little patients on their voyage. A copious diary of the sayings and doings of the interesting youngsters during their entire absence is recorded in the columns of the *New York Herald*. It is now known that the ferocious dog did not suffer from rabies, as none of the bitten dogs have manifested, in the slightest degree, any of the symptoms of that disease. All the children, the inoculated and non-inoculated, are enjoying good health.

H. N. V.

Reviews and Notices of Books.

A Doctor's Experiences in Three Continents.—By Edward Warren, M.D., LL.D. Bey by Khedival firman. Baltimore, Md.: Cushings & Bailey.

A personal narrative extending over very stirring times and related by one who was taking a very active part. Dr. Warren began his professional career just as the war of secession broke out. After having served with distinction in the Confederate army, where he saw much service, and aided in the work of organization and hospital establishment, circumstances led to his accepting a post of some importance under the Egyptian Government. At Cairo his professional work proved very acceptable, and he was the recipient of high honors from the Khedive. Repeated attacks of ophthalmia obliged him to leave Egypt. He then practised for a time in Paris with considerable success, and received the coveted ribbon of the Legion of Honor. The incidents connected with such an eventful life are portrayed with vigor, and contain much of interest to the medical reader. There is, perhaps, here and there betrayed a fiery spirit and a somewhat censorious bearing towards confrères, whilst the self-laudation is not entirely in good taste. These very faults may possibly account for the bitter enmities and opposition he certainly excited in various quarters.

The Principles and Practice of Medicine.—By the late Charles Hilton Fagge, M.D., F.R.C.P., Physician to and Lecturer on Pathology at Guy's Hospital; Examiner in Medicine, Univ. London. Vol. I. Philadelphia: Lea's Sons & Co.

In the preface to this work we are told that it ends the principal labor of its distinguished author for the last twelve years of his life. It will always remain a monument of his skill and great industry—a monument that will be even "more enduring than brass." The work is much more than an ordinary text-book on the Practice of Medicine. It is, in addition, an able resumé of what the past and present physicians of Guy's Hos-

pital have contributed to the domain of general pathology and clinical medicine, as well as an epitome of the experience gained in the wards and dead-house of this great London hospital.

The work is one that has evidently been prepared with the greatest care. The reading of even a few pages will convince the reader that it was not prepared for students only. The aim of the author to give to the world something above the ordinary text-book is very evident, and we have no doubt but that every reader of its pages will allow that the author has been eminently successful in his aim. At the time of his death, Dr. Fagge had, with the exception of the diseases of the heart and skin, completed his great work. Diseases of the valves of the heart are contributed by Dr. Wilks, and those on the skin by Dr. Pye-Smith.

After an introductory chapter which deals with the general causes of diseases and modes of death, the author deals with general morbid processes, in which he includes contagion, fever, inflammation, tubercle, tumors and syphilis. In the treatment of the latter disease, great stress is laid on the importance of the administration of mercury during the existence of the primary sore. It is contended that by following this method, very frequently the development of the secondary symptoms are altogether prevented. On this point there is great discrepancy of opinion even among those who have had large experience in the treatment of this disease. We believe that too much stress is laid on this alleged power of mercury. It should be remembered that not infrequently secondary symptoms never appear when no mercurial or iodine treatment has been adopted. Sigmund treated 1,000 cases of primary syphilis without either drug, and in 40 per cent. the secondary manifestations were either entirely absent or so trivial as not to be noticed by the patients. The custom of English physicians in treating the primary disease with mercury internally is so universal that its natural history is not practically known to them.

Following the general morbid processes, we have two hundred pages devoted to a description of the specific diseases. In speaking of the possibility of our ever being able to cut short typhoid fever, the author remarks that at times the disease spon-

taneously abates at the end of the second week, and that he sees no reason why the number of cases in which this occurs should not be increased by the administration of some medicine or other. He has no sympathy with the views of those who look upon the antipyretic treatment of fever as useless or injurious. He is convinced of the great damage the tissues receive from the effects of a high temperature, especially when it is long-continued, as we find it in typhoid.

The account of the diseases of the nervous system, which follows, is very full and elaborate, and rich in the experiences of the wards of Guy's Hospital.

The concluding portion of the first volume deals with the diseases of the respiratory system, organic and functional. The same thoroughness characterizes the account given of these diseases as those we have just noticed. A notice of the second and concluding volume of Dr. Fagge's altogether admirable work will appear in a future number of this JOURNAL.

Books and Pamphlets Received.

DRAINAGE FOR HEALTH; or Easy Lessons in Sanitary Science. By Joseph Wilson, M.D. Second edition. Philadelphia, P. Blakiston & Co.

THE METHODS OF BACTERIOLOGICAL INVESTIGATION. By Dr. Ferdinand Hneppe. Translated by Hermann M. Briggs, M.D. Illustrated. New York, D. Appleton & Co.

ON THE FŒTUS IN UTERO, as Inoculating the Maternal with the peculiarities of the Paternal Organism. By Alexander Harvey, M.A., M.D. London, H. K. Lewis.

LEWIS'S POCKET MEDICAL VOCABULARY. London, H. K. Lewis.

A GUIDE TO THE EXAMINATION OF THE NOSE, with Remarks on the Diagnosis of Diseases of the Nasal Cavities. By E. Cresswell Baber, M.B., Lond. With illustrations. London, H. K. Lewis.

ON THE SUPRAPUBIC OPERATION OF OPENING THE BLADDER FOR THE STONE AND FOR TUMORS. By Sir Henry Thompson, F.R.C.S. London, J. & A. Churchill.

THE YEAR-BOOK OF TREATMENT FOR 1885. A Critical Review for Practitioners of Medicine and Surgery. Philadelphia, Lea Bros. & Co.

A SYSTEM OF PRACTICAL MEDICINE BY AMERICAN AUTHORS. Edited by William Pepper, M.D., LL.D., assisted by Louis Starr, M.D. Vol. IV. Philadelphia, Lea Brothers & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, January 22nd, 1886.

T. G. Roddick, M.D., President, in the Chair.

Pathological Specimens.—Dr. Wm. Gardner exhibited the following specimens:—1. *A Fibrous Polypus of the size of an orange*, removed from a woman aged 48. The growth hung in the vagina, and was attached along the whole length of the posterior wall of the uterus. The patient was blanched to translucency by hemorrhage, which had lasted almost constantly for five years. She made a good recovery. 2. *Two diseased Ovaries*, slightly enlarged and cystic, being the second ovaries respectively from two cases of ovariotomy—the tumor in one case being a unilocular ovarian cyst; the other the ordinary multilocular cystoma. In each case the uterus was enlarged and retroverted. Menorrhagia had in both been a prominent symptom. In such cases where the second ovary is diseased, the question arises as to what should be the proper treatment when a part of the ovary seems healthy. Schröder has recently published reports of a number of cases in which, instead of complete removal, he has excised the diseased tissue by a wedge-shaped incision and brought together the cut surfaces by sutures. The object in such cases is to permit, if possible, subsequent conception. Dr. Gardner was not aware, however, of conception having occurred under such circumstances. Doubtless, however, after ovariotomy, the second ovary has often been unnecessarily removed, as slight enlargement and a cystic condition do not necessarily imply a condition which shall develop into an ovarian tumor requiring the ordinary operation. The responsibility on the part of the surgeon in dealing with such conditions appears to assume a new aspect in the light of Schröder's experience.

The President said that one objection to a woman becoming pregnant after this operation was that sometimes the abdominal walls give where the incision had been. He had seen this occur once, and produce hernia of the pregnant uterus.

Dr. Alloway said he had attended this woman in her confinement, and had great difficulty in keeping the womb in proper position; it came through the abdominal walls and stretched the integument greatly. She has to wear a pad constantly to keep the abdominal organs from coming through.

Dr. Geo. Ross said that the first woman upon whom he had performed ovariotomy (she being unmarried) was told by some of her friends that she could not conceive. In twelve months time she became pregnant, and although the case was one of breech presentation, and although the wound had not healed by primary union, a clamp having been used, still she had no trouble during labor.

Dr. Shepherd said that if the wound healed by granulations, it ought to be all the better.

Cerebellar Disease.—Dr. Wilkins read a paper on "Cases of Cerebellar Disease." (*See page* 513.)

Dr. Stewart asked Dr. Wilkins what were his reasons for considering the second case to be cerebellar and not cerebral; and why hemorrhage?

Dr. Wilkins, in reply, stated that the sudden nature of the death and the symptoms immediately preceding it pointed conclusively, he thought, to interference with the respiratory centre in the medulla. The state of perfect health up to, at the most, three days preceding death, and the sudden onset of the symptoms, pointed to hemorrhage. Had this hemorrhage been into the cerebrum, there would have been other symptoms present, according to the region affected; if into the anterior portion, there would most likely be some psychical symptoms; if into the motor area, some motor phenomena would be expected to be present; if into the posterior portion, there would probably be some sensory symptoms. Further, persistent vomiting is more frequently present in cerebellar lesions, or lesions in its immediate vicinity.

Dr. Godfrey asked if any of the members had bled for cerebral hemorrhage. He had once done so, with favorable results. The diagnosis was verified by an autopsy made a few months later, the man having been killed by falling off the roof of a house.

Dr. Hy. Howard said he had bled for everything. Years ago he had bled as many as forty persons in a morning. The last time he had used his lancet was seventeen years ago, on a man who had an attack of apoplexy. He got well, but had right-sided paralysis for the rest of his days—ten years.

Stated Meeting, Feb. 5, 1886.

T. G. Roddick, M.D., President, in the Chair.

PATHOLOGICAL SPECIMENS.

Two Cases of Tait's Operation.—Dr. Trenholme exhibited two pairs of ovaries and tubes. The ovaries were all enlarged and diseased. In the first case, one pair were removed from a woman, aged 23 years, who, since she began to menstruate, had dysmenorrhœa. Some years ago her menses were stopped by a cold bath, and each month since then she has suffered from epileptic attacks at this period. In spite of bromide of potassium, etc., these attacks were getting worse. An examination revealed enlarged ovaries. The operation for their removal was the most difficult he had had. There was an enormous amount of adipose tissue in the abdominal walls, and the rectimuscles were very tense. The right tube was free, and disposed of. The left tube looked at first like a multiple or lobulated ovary from old inflammatory constrictions. This tube and ovary were bound down by adhesions all round, and covered over by the adherent omentum. After the operation, the patient had a severe attack of peritonitis. This was treated by hot fomentations, large doses of opium, and injections of linseed tea. She complained of intense thirst, and as she appeared to be almost dying, she was allowed cold water *ad libitum*. The wound, which was nicely closed, was torn open on the third day to allow vent to some exudation. No drainage was used. The patient recovered, and has had no convulsions since. The ovaries were about the size of bantam's eggs, and cystic.

In the other case, the appendages were removed from a woman who had suffered ever since she began to menstruate, 14 years ago. Was married ten years, and had one child. She has suffered from almost continual pain, aggravated each month.

Pain began one week before her period, and continued for a week after, leaving her only five days free. On examination, the uterus was found four inches deep and the ovaries enlarged. The right ovary had a projection like a teat on it. The operation was performed a week ago, and the patient is doing well.

Intrauterine Myoma.—Dr. William Gardner exhibited the specimen and related the case. Patient, aged 32, was sent to him by Dr. R. T. E. McDonald of Sutton, October 15th, 1885. She had been married 13 years, and had had one child eight years after marriage. She suffered from profuse and painful menstruation at intervals of three weeks. An examination revealed the cause. Removal of the appendages was thought of, but ergot in the intervals and astringents at the period were tried. She returned three months later with a history of increased hemorrhage. She now was extruding shreds of the fœtid tumor, probably from the action of the ergot. She had also had chills. It was decided to at once remove the myoma. The cervix was first incised with the thermo-cautery, and by means of a pair of scissors and the serrated scoop the whole was removed. A double drainage-tube was then inserted, and sutured to the cervix. Irrigation of weak carbolic solution was used every two hours. Twenty-four hours after the operation the temperature rose to 102° ; irrigation was now constantly used till the temperature fell. Some days after, the suture sloughed away and the tubes came out, causing the temperature to again rise. After this, a single tube with a cross piece at the end was used, thus making it self-retaining. Patient made a good recovery. Dr. Gardner laid great stress upon the necessity of frequent irrigation in these cases. Mr. Tait used to lose 50 per cent. of these cases, and now his rule is to remove the appendages. He once had to operate hurriedly at night to relieve alarming symptoms caused by the os being plugged with an extruding and sloughing myoma. The patient did well.

Dr. Stewart asked what caused the tumor to slough.

Dr. Gardner said that no doubt it was due to its being rapidly starved by the effect of the ergot on the uterus.

The President said he could testify to the necessity of free irrigation in these cases. He had charge, during a temporary

absence of Dr. Gardner from the city, of two of these cases of his, and noticed that if by any accident the tubes came out, the temperature went up.

Dr. Trenholme related a case of post-partum hemorrhage occurring in a patient of his. On introducing his hand, he found a tumor about the size of an orange. By the aid of ergot and gallic acid the bleeding was arrested, but when three months pregnant, she lost about a cupful of pus. A week later she aborted, and now no tumor could be felt. She has had two or three children since. He had removed uterine myomata successfully without the use of drainage-tubes, but now believed they should always be used.

Salivary Calculus from Steno's Duct.—Dr. A. L. Smith exhibited the specimen removed by him from inside the cheek. After its removal, a thin impissated fold came away.

"*Weid*" *or Ephemeral Fever.*—Dr. Kennedy read a paper on this subject. He had met with several severe forms of weid whilst in charge of the obstetrical department of the Western Hospital. He looks upon weid as being more than an exaggerated milk fever, and something entirely apart from puerperal fever. Dr. Kennedy defines weid as a specific ephemeral fever occurring in women of nervous temperaments during the earlier periods of lactation, commencing by severe chill and ending in profuse diaphoresis, such attacks seldom exceeding 24 or 36 hours. As one diagnostic sign, the chill invariably commences in the back, between the shoulders—patients will often indicate the exact spot,—and from there it rapidly extends over the entire body. Older authorities gave this subject some importance, but modern authors consigned it to oblivion as a "legend no longer to be believed in." Our improved treatment of lying-in patients gives fewer opportunities to observe such cases. The different views as to its causation were given. Dr. Kennedy did not believe in its being of septicæmic origin, nor of its being merely from distended breasts, but analagous to the rigor and fever occurring after an amputation or passage of a catheter. The after stages, especially the profuse diaphoresis, indicate also deep impressions made upon the vaso-motor centres. A report of a typical case was read.

Dr. Campbell said it was a long time since he had seen a case of weid, but had many cases years ago. He thought that women were better housed and nursed now-a-days. He believed it was usually induced by a sudden chilling of the body, and was easily diagnosed.

Dr. Shepherd looked upon this condition as simply inflammation from retained secretion, similar to what is seen after amputation, if the secretion is pent up.

Dr. Smith said he did not like the names ephemeral fever or weid; he thought milk fever better. He tries to avoid this trouble by putting the infant to the breast soon after delivery.

Dr. Campbell insisted on the infant being kept from the mother till there were signs of milk in the breasts.

Dr. Gardner said that some German authors call the disease known as weid late puerperal fever. It is due to a variety of causes. Often it is seen from the 7th to the 14th day, from cold, gastric disturbance, or nervous influence, and frequently it is due to septic poison, auto-infection, caused by the breaking down of clot in a sinus or from abrasion of the genital tract. He said that putting the child to the breasts early powerfully favored involution of the uterus.

The President said that the septic poison might not come from the genital tract at all, but be from a minute quantity of pus retained in the breast gland. He had seen death follow septicæmia caused by a drop of pus under a corn on the foot.

Stated Meeting, February 19, 1886.

T. G. Roddick, M.D., President, in the Chair.

Uterine Fibroid.—Dr. Trenholme exhibited a large uterine fibroid which he had removed the previous week from a woman aged 33. Patient, who was married and had borne children, had suffered from symptoms of fibroid for some sixteen years, and as the hemorrhages were becoming more severe, had requested that an operation should be performed. Dr. Trenholme consented and performed the operation. The tumor was encircled by a wire écraseur one inch above the os uteri and removed;

there was considerable hemorrhage, which was difficult to control. The patient never rallied from the operation, but died seven hours after from shock.

Sarcoma of Spleen in a Dog.—Dr. W. Johnston exhibited a specimen of angeio-sarcoma removed from a dog. The tumor weighed 4 lbs., and was continuous with the upper end of the spleen substance. The dog suffered from abdominal dropsy, for which he was tapped, and died of peritonitis a few days subsequently.

Large Urinary Calculus.—The President presented a large uric acid calculus which he had recently removed from a man aged 69, by the lateral operation. The stone weighed 3¼ ounces. The patient had suffered from symptoms of stone for five years, and had been frequently sounded without result. The man recovered from the operation without a bad symptom.

Dr. Hingston said he took exception to Sir Henry Thompson's statement that if a stone be over 3 ozs. weight it must lacerate the neck of the bladder. The suprapubic operation, which appears to be much simpler than the lateral method, had not as yet been performed in Lower Canada. He preferred the lateral operation.

Dr. Shepherd quoted a case where a German surgeon had attempted the suprapubic operation, but finding the peritoneum came down abnormally low, he sewed up the wound, performed the lateral operation, and the man did well. However, he believed that the suprapubic operation was the operation of the future for large hard stones. It had been practised with brilliant success by the leading surgeons of France, Germany and America, and now was being adopted by the most conservative of English surgeons.

Dermoid Cyst.—Dr. Wm. Gardner presented two specimens, and briefly narrated the cases:—

Case I. *Dermoid cyst containing a bunch of hair, two well-formed incisor teeth, and one bicuspid tooth attached to a piece of bone, also a fourth tooth in another part of the cyst wall.*—The fluid contents contained a large quantity of fat, and on cooling looked like drippings of meat. The other ovary was an

aggregation of cysts, and was also removed. The patient, an unmarried lady of 30, had noticed the tumor for only four months; she had had several attacks of pelvic pain in the side on which the tumor was. She made a rapid and easy recovery, leaving for home on the eighteenth day.

Case II. *Tait's Operation.*—Uterine appendages removed for a case of uterine myoma. Both ovaries consisted of a mass of smooth cysts and were three times the normal size. The tubes were healthy. The myoma was as large as a child's head. The patient had been married three years and had never been pregnant. She was much blanched by hemorrhage and watery discharges which had lasted for five years. She had suffered from fever, abdominal distention, and profuse metrostaxis after the operation, but at the date of the meeting (eleventh day) was doing perfectly well.

Dr. Gardner said that since September last he had had nine successive successful cases of abdominal section; eight were ovariotomies and one removal of uterine appendages. Of the eight ovariotomies, two were for dermoid cysts. In four of the cases, the second ovary was also found diseased, and removed.

Malignant Stricture of the Œsophagus.—Dr. Geo. Ross showed a specimen of cancer of the œsophagus, the following being the principal facts in the clinical history: A man, aged 54, 6 feet 4 inches high, and who had been immensely powerful, was admitted into the hospital with intense dysphagia and in a state of great emaciation and weakness. There was an intense fœtor of breath, and he had had a severe cough for some time with a copious similarly fœtid purulent expectoration. He was intemperate, and was in the habit of drinking raw spirits. The difficulty of swallowing had gradually developed during more than a year, until of late even fluids were forced down with the greatest difficulty and straining. There had never been any vomiting or regurgitation of food. An œsophageal bougie of soft, flexible rubber and of almost the largest size was twice passed its full length without meeting with any special obstruction. It slid down with ease, and not the slightest force was used. The withdrawal of the bougie was followed by the escape of horribly

foul air from the patient's mouth, and the instrument itself was smeared with stinking pus. Physical examination of the chest gave signs of cavity in left apex and of softening deposit, with cavity, localized in right mammary region. He rapidly became enfeebled and died in about a month from asthenia, continuing to the end to swallow a large quantity of fluids every day, and there was never seen any regurgitation. The diagnosis had been epithelioma of the œsophagus, involving the tube in such a way as to produce all the phenomena of stenosis and yet permit of considerable patency of the lumen; secondary cancer of the lungs with gangrene. The autopsy showed an epithelioma of unusually firm texture situated just below the level of the cricoid cartilages and extending for about two inches. It encircled the œsophagus, and the stricture was almost impermeable. It was only after repeated efforts that a No. 2 flexible (urethral) catheter could be insinuated through it. In the apex of the left lung was a large cavity containing a considerable slough lying loose within it; the chamber was excessively fœtid. The upper part of the lung was firmly adherent to the diseased portion of the œsophagus, but *no communication* could be shown between the pharynx and the apex-cavity. In the front of the right lung was a mass of cancer which had softened centrally.

Dr. Ross directed attention to some points of the case. He thought the disease might here have originated from the habit of drinking copiously of raw spirits. The absence of all regurgitation was a remarkable feature, considering the high situation of the growth and the tightness of the stricture. He also asked the question: "What course was taken by the bougie?" The tight, firmly organized stricture must have existed for a long time; such a large instrument could not possibly have passed through within two or three weeks of the man's death. The bougie was too large, the space too narrow, and the stricture too high for it to have bent upon itself. Could it have passed into the cavity in the apex of the lung? If so, there must have existed a direct and free communication with this part from the pharynx, which avenue had been subsequently shut off by adhesive inflammation. Except on the latter hypothesis, he was at a loss to explain the facts given above.

The PRESIDENT inclined to the belief that the bougie went down to the stomach, and that since it had been introduced, a few weeks, the growth had increased, producing the high stricture shown.

Malignant Disease of the Rectum treated by Excision and Colotomy.—DR. GEO. E. FENWICK read a paper on this subject, which will appear in our next issue.

DR. HINGSTON advocates operating if the disease be confined to the bowel; if it does, he prefers colotomy. He has noticed that malignant disease of the rectum does not return so soon as when in the mammæ.

DR. SHEPHERD said that Dr. Fenwick was to be congratulated upon the results of his operations. He remarked that many continental surgeons removed the coccyx so as to get more room; indeed some remove also the sacrum for this end.

The PRESIDENT said that as a rule colotomy was a much more satisfactory operation when performed for syphilitic stricture than for cancerous. The treatment for syphilis of the rectum progressed better when that bowel was given a rest.

CHATHAM MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, March 9th, 1886.

J. P. RUTHERFORD, M.D., IN THE CHAIR.

(From our own Correspondent.)

Perforation of the Vermiform Appendix, with specimen.—DR. MCKEOUGH, through the kindness of Dr. Shaver of Morpeth, exhibited an appendix vermiformis, showing perforative ulceration. The patient was first seen by Dr. Shaver about 5 a.m. on the 25th of January last, who found him suffering from pain and some tenderness in the region of the cæcum; pulse and temperature normal. Rest, opium and turpentine stupes were ordered. At 7.30 p.m. he felt very comfortable, pain and soreness being much less; pulse 68, temperature 99¼°. His appetite was good; his nourishment, however, had been limited to milk all day. He was again seen about midnight, and found in a state of collapse, with symptoms of perforation. He lingered

until about 6 a.m. the following morning. The post-mortem revealed the condition shown in the specimen exhibited. A small body, thickly coated with mucus, was found in the appendix, which proved to be an orange seed. There was no hemorrhage or fæcal extravasation. The patient had suffered from several attacks of "colic" during the past fall and early part of the winter, but consulted no medical man. The day previous to his attack of illness he felt a slight pain in his abdomen, but was otherwise perfectly well. In this case, as the symptoms pointed to inevitable death, Dr. McKeough remarked that in the light of recent abdominal surgery, and considering the length of time the patient lived after symptoms of perforation set in, laparotomy might have been resorted to with reasonable hope of success.

Strumous Disease of the Elbow Joint.—Dr. Murphy exhibited the diseased bones of an elbow-joint, presenting the characteristic features, in a marked degree, of scrofulous inflammation of the articular ends of the bones; also a photograph of the arm previous to amputation. The disease commenced a year previously in a colored lad aged 15, with a tuberculous family history. He was not seen by a surgeon until extensive suppuration and disintegration of the joint had occurred. The boy was failing in health rapidly from the pain and constant discharge from the joint, to rid him of which amputation was resorted to, excision of the joint being out of the question on account of the very poor health of the patient and the extensive character of the disease. The wound healed by first intention, and the lad was picking up nicely.

Dr. Holmes remarked upon the necessity of the early recognition and proper treatment of these cases in their first stage, and cited several instances in which this being neglected ended disastrously to the patient.

Two Cases of Vesico-Vaginal Fistula.—Dr. Murphy read the history of the two following cases:—

Case I.—M. B., aged 19, unmarried, began to menstruate between her 16th and 17th years. Her mother being dead, and having no one to advise her, she sought to arrest the menstrual

flow by introducing into the vagina a wooden spool. After this event, she suffered severe abdominal pain during menstruation, for which she received medical treatment from time to time, anodynes being administered, which gave temporary relief: the real cause of the pain and distress being unsuspected, and the case supposed to be one of dysmenorrhœa. The patient continued in this condition for nearly two years, or until a new difficulty arose in consequence of the urine constantly trickling away from the vagina. A digital examination was now instituted, which revealed the fact that the anterior wall of the vagina, especially the whole upper part, was encroached upon by what appeared to be a large, solid, globular-shaped body projecting through the base of the bladder into the vagina. A fœtid smell was also apparent. It was not until this juncture that the patient confessed to having introduced the foreign body, as above stated. This information was opportune. The parts being extremely irritable, the patient was enjoined to keep her bed for a few days, and soothing injections used. An occasional anodyne suppository, the use of a simple diet, demulcents, and the division of several cicatricial bands, constituted the treatment prior to the operation for removing the foreign body. This was accomplished by placing the patient in the usual position, exposing the fistula to view by a Sims' speculum, then introducing a Thompson's lithotrite up through the fistulous opening and crushing the phosphatic concretions which surrounded the foreign body on all sides to the extent of an inch or more. The substance removed, minus the spool, more than filled an ordinary ounce quinine bottle, and the fistulous orifice, which was left to be subsequently dealt with, was fully an inch and three-quarters in its long axis. Some six weeks was allowed to elapse before the operation for the closure of the fistula was undertaken, the interval being employed in treating the existing vaginitis and cystitis, and improving the general health of the patient. The operation was performed in the usual manner as described in the text-books, and was a perfect success. The breach of continuity was so great after passing the edges of the fistula, that it required eleven silver sutures to properly close it.

Case II—Mrs. S.—The cause of the fistula in this case was a prolonged labor of several days' duration, after the fœtal head had descended into the pelvis. The operation was performed similarly as in case No. 1, and was an entire success.

TORONTO MEDICAL SOCIETY.

Stated Meeting, March 4th, 1886.

The President, Dr. Cassidy, in the Chair.

(*From our own Correspondent.*)

Dr. McPhedran reported a case where, a few days after labor, the patient was taken with sudden dyspnœa, with croupy cough (thought to be due to œdema glottidis), which continued for some time. There was no laryngoscopic examination made of the parts. General anasarca of the body prevailed.

Dr. G. B. Smith exhibited a patient, a lad aged 18, with defective extensive power of the right great toe of some years' duration, and said to have come on "after being over-heated and placing the foot in cold water."

Some of the members considered the defect was due to an obstruction to extension produced by a slight osteophitic prominence in connection with the anterior and upper aspect of the head of the first metatarsal bone. Others thought it due to an abnormal state of contraction of the flexor muscles.

Dr. Alex. Davidson then related two cases in his practice, the outcome of the recent railway accident which occurred on the Northern Railway, near Thornhill. One was that of an injury to the clavicle at its sternal extremity. The condition (or lesion) present was a hardened thickening surrounding the bone at about an inch from its sterno-clavicular articulation. It might be supposed to have been an impacted fracture. The patient was removed to his home in Hamilton before a measurement of the clavicles was obtained, and thus lost from observation. The other case was that of a man who had received a severe laceration of the scalp, extending in an antero-posterior direction to the extent of about six inches, dividing all the soft parts down to the cranium, and denuding the bone of its periosteum in small spots.

A discussion ensued as to the likelihood of exfoliation of the denuded bone taking place.

Drs. Cameron and McPhedran related several cases in their practices bearing upon the subject, and the weight of opinion bore negative testimony as to the probability of exfoliation taking place in injuries similar to this one.

The meeting of the 18th inst. was devoted to the hearing of a paper on *Hemiplegia* by Dr. Joseph Workman, which was the translation of an article by Prof. Bianke of Naples, and furnished a very interesting account of the history of the disease and the conditions produced by it. The conditions in the post-hemiplegic state and the various phenomena relating to the disease were very graphically described, showing how utterly changed in disposition the unfortunate victims of the disease become. The paper also pointed out fully the great value of the thermometric registering as a guide to the prognosis of the disease, and dealt freely with the sequelæ which may supervene upon an attack. The paper was listened to with much interest and appreciation.

HURON MEDICAL ASSOCIATION.

Annual Meeting, held at Seaforth, January 12th, 1886.

Dr. Alex. Taylor, President, in the Chair.

(*From our own Correspondent.*)

Dr. Campbell presented a case of progressive muscular atrophy of the muscles of the left shoulder, except the deltoid. Those most affected appeared to be the teretes and spinati muscles. Patient had presented himself for treatment two years before, which was commenced by first producing an eruption over the wasted muscles, then by electricity. Notwithstanding treatment, the wasting continued, and is extending to the other shoulder. Dr. Campbell also presented a fifteen year old case of locomotor ataxia. The sciatic nerve had been stretched about five years ago by Dr. James Stewart, which caused the lightning pains to disappear for about a year, when they returned as severely as before. Reflexes all absent. The case is gradually progressing.

Dr. Young (Londesboro') presented a case of necrosis of the inner condyle of the right femur. Patient first complained of pain in the leg. Aspirated for pus, but found none until six months after, when necrosis had taken place.

Dr. McKid presented a case of traumatic aneurism, of long standing, of left femoral artery, produced by a pistol shot near the popliteal space. The ball can be felt sacculated on the anterior aspect of the thigh. The aneurismal thrill is very distinctly felt all along the artery into the abdomen, giving the idea that it has become fusiform with atheroma and degeneration of the coats. Dr. McKid also presented a case of leucocythæmia in a boy of about six years. Spleen very much enlarged; abdomen also enlarged, but very little tympanitis, giving the appearance of ascites. Blood not examined.

Dr. Campbell presented a case of infantile paralysis of the right side. The attack came on suddenly when the child was in perfect health at the age of 2½ years. It was ushered in by a chill in the morning, followed by fever and loss of power on right side at evening. Has been under treatment about 2½ years with little or no improvement.

Dr. Gunn (Brucefield) presented a case of epulis of superior maxillary of six years standing. Has been four times removed by dentists—the last time about two years ago.

Dr. McKid presented a case of compound comminuted fracture of left femur, treated at Montreal General Hospital 101 days. Three and a half inches of shortening. Was benefitted by plaster jacket. Also a case, age 85, which was twice aspirated above the pubis for retention of urine from enlarged prostate. Tapped after, and put in a drainage tube above pubis. Washed out the bladder with 40 per cent. carbolic solution, and the urine, from being very fetid, became normal on second day. The prostate was found to be very much enlarged and hard. Massage was practiced night and morning, as recommended by Dr. Shepherd, and the urine began to pass by the natural way at the end of the third week. Removed drainage tube at the proper time, the massage having been continued. A scrotal hernia which had existed for some time was reduced,

and a truss applied. The patient recovered, and is now quite well.

Dr. Campbell mentioned a case reported in the *Canada Lancet*, which had been aspirated 34 times.

Dr. Graham (Russell) reported having aspirated above the pubis from retention of urine 14 years ago.

Dr. Campbell reported a case of compound fracture of left leg successfully treated by iodoform without suppuration.

Dr. Smith (Seaforth) reported three cases of *nævi* of considerable size treated by the thermo-cautery, illustrating the operation by passing the red-hot iron into a fold of paper and moving it slowly around, to show that the anastamosing vessels were completely destroyed. The treatment was entirely successful, and the cicatrix in each case was trifling.

Dr. Gunn mentioned a case cured by the galvanic current.

Dr. Graham reported two cases of asymmetry—one of Dr. Owens, London, England; the other his own.

Dr. Owen's Case.

Left arm..... $\frac{1}{4}$ of an inch longer than the right.
Left foot..... $\frac{5}{8}$ of an inch longer than the right.
Left ear .....Large.
Left lower extremity ....$1\frac{1}{8}$ of an inch longer than the right.

Dr. Graham's Case.

	Left.	*Right.*	*Difference.*
Above elbow.....	6 inches.	7 inches.	1 inch.
Length of hand.....	4 "	$4\frac{1}{8}$ "	$0\frac{1}{8}$ "
Circumference of fore-arm	6 "	$6\frac{1}{2}$ "	$0\frac{1}{2}$ "
Length of arm.....	$16\frac{1}{4}$ "	$17\frac{1}{8}$ "	$0\frac{3}{4}$ "
Length of leg.....	$18\frac{1}{8}$ "	20 "	$1\frac{7}{8}$ "
Circumference of thigh...	$11\frac{3}{4}$ "	13 "	$1\frac{1}{4}$ "
Length of foot.....	$6\frac{1}{4}$ "	$6\frac{3}{4}$ "	$0\frac{1}{2}$ "

Dr. Graham also exhibited the stomach of a woman, aged 50, who committed suicide by taking four drachms of carbolic acid. The corrosive action of the poison was singular, throwing the mucous membrane into longitudinal folds similar to the tucks in a dress. Dr. Graham also showed the cholera comma bacillus of Koch.

Dr. McDonagh, formerly practicing in Goderich, now in Toronto, and recently returned from Vienna, reported a very

interesting case of hypertrophy of the vocal cords, producing complete aphonia. This was caused by the patient swallowing a small bone, followed by an abscess, which broke, but the hoarseness continued. The cure was completed by producing anasthæsia of the larynx with cocaine, from time to time, and applying chromic acid carefully to the diseased cords by the aid of the laryngoscope.

The election of officers was then proceeded with. Dr. Campbell was elected President; Dr. Young, Vice-President; Dr. Worthington, Secretary.

It was resolved to hold the meetings for the ensuing year alternately at Clinton and Seaforth. Votes of thanks were passed to the directors and caretakers of the Institute rooms.

There being a little time, Dr. Campbell reported an interesting case of puerperal eclampsia treated successfully by the use of pilocarpine hypodermically in connection with Morph. Sulph., in same way, at intervals, producing profuse sweating and controlling the convulsions. The amount used of each was one-quarter grain.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Suspected Pregnancy.—In a clinical lecture published in *Med. & Surg. Reporter*, Dr. Goodell said: As a rule, we cannot *swear* to pregnancy until we can hear the fœtal heart-sounds; but there is strong presumptive evidence if the os is soft like one's lips. When the os is as hard as your nose, you may be reasonably sure that there is no pregnancy. Once in a long time a fibroid tumor will give us a soft os and cervix, but this is very exceptional. This condition we will find as early as the end of the first month, though it becomes more marked as pregnancy is farther advanced. Here there is a little softening, but very little. Her abdomen is too fat to circumscribe the womb and discover whether it is enlarged, so that evidence is here lost. There is only a shade of darkness about the nipple, not so much as there ought to be in pregnancy. This woman may not be pregnant, and may be suffering only from amenorrhœa. We will

give her Blaud's pill: Dried sulphate of iron; carbonate of potassium, āā ʒ ij; glucose, q s. M. ft. pil., No. xlviii. S.—Two thrice daily for one week and then increase one at each dose. If she is not pregnant, this will bring on her menses; while, if she is pregnant, it will not cause a miscarriage. Remember, a *natural* abortion is not very dangerous; for some reason the ovum has become detached from the womb, and it passes harmlessly away.

The Latent Anæmia of Typhoid Fever. Dr. Frederick P. Henry of Philadelphia has made a number of microscopic examinations of the blood during and after typhoid fever, and finds that while the number of red corpuscles is fully up to or above the normal standard during the fever, during convalescence it often sinks considerably below the number found in health. This he explains as a latent anæmia, the loss of water from the blood during the disease causing a relative increase in the number of red corpuscles. This view leads him to the belief that typhoid fever patients should take water as a medicine as well as to relieve their thirst. He quotes the late Dr. John F. Meigs of Philadelphia, who expressed similar views in one of his lectures at Pennsylvania Hospital in 1880.—*Polyclinic.*

The Treatment of Carbuncle.—Dr. James Collins says in the *Philadelphia Med. News:* I have lately treated two cases of carbuncle on the back of the neck by a method which seems to have some advantages. The patient is put under the influence of an anæsthetic, and a linear incision made. I then take a scoop and remove all the necrosed tissue, and wash the parts thoroughly with an antiseptic solution of mercuric chloride. I then put in a drainage tube, and insert two stitches to bring the central part together. Each day the cavity is thoroughly washed out with the antiseptic solution. The patients have done well, and the cicatrix has been less than after any other method I have tried. The success depends upon the removal of the necrosed tissue and the use of the antiseptic solution.

CANADA

Medical and Surgical Journal.

MONTREAL, APRIL, 1886.

TRAUMATIC PHTHISIS.

Under this title Prof. Mendelsohn has recently discussed (*Deutches Archiv f. Klinische Medicin*) the relations between phthisis and mechanical injury to the lungs. The first part of his paper deals with such forms as occur after inhalations of fine irritating particles—glass, steel, tobacco, dust, etc. Nothing specially novel is given here. The tubercle bacillus is regarded as the exciting cause of the tuberculosis, and its presence accounted for by assuming that it either enters at spots damaged by the foreign particles or else is directly carried in by them. The writer insists forcibly that the bacillus is, mechanically, only a passive agent in the matter, and is carried into the tissues by active cell processes. Against the assumed omnipresence of the bacillus, as contrasted with the comparative rarity of tubercle, he instances Prof. Leyden's researches, where, after careful and laborious examinations of air, dust, etc., in a phthisical ward of the Berlin Charité, not a single bacillus was ever found to be present.

The last and most important part of the article concerns the part played by thoracic contusions and other forms of traumatism in causing phthisis. Nine cases of his own are given in full where thoracic contusions and, in one case, wound of the apex were followed, after intervals ranging from two to eighteen months, by phthisis; the proof of these cases resting on symptoms, physical signs, examination of sputum, and inoculation of animals. No autopsies. The patients were all previously in robust health. In only one case was any scrofulous or phthisical

family tendency present. The ages ranged from 17 to 70 years. The symptoms immediately after the injury were chiefly dyspnœa, cough, and hæmoptysis; the external injuries were slight.

Prof. Mendelsohn assumes that these injuries act injuriously by producing what has been termed a bacillus atmosphere (*i.e.*, local conditions and surroundings favorable to the development of the tubercle bacillus). This he considers present when rupture of lung tissue has been produced by indirect violence, and especially accompanied by hemorrhage. On the other hand, injuries producing severe local inflammation, as in bullet wounds and injuries from broken ribs, etc., do not seem to afford these conditions, and if their immediate effects are recovered from, are not followed by phthisis.

With regard to local tuberculoses in other organs than the lungs, in joint lupus, etc., he is far less explicit, his statements being vague and unsatisfactory.

The subject should form an excellent one for collective investigation, and such cases as here cited, if carefully looked for, would probably be found to occur far more commonly than has hitherto been supposed.

ELIMINATION OF ARSENIC WITH THE MILK.

That arsenic can be eliminated with the milk in sufficient quantity to cause fatal poisoning in the infant, is proven by a case which recently occurred in Paris. A wet-nurse, who narrowly escaped being poisoned by arsenic, nursed an infant who died in a few hours from choleraic symptoms, and in whose viscera were found five milligrammes (1-13th of a grain) of arsenious acid. M. Pouchet submitted the wet-nurses of the St. Louis Hospital to arsenical treatment; one of them took during a week eight milligrammes (one-eighth of a grain) a day of Fowler's solution. Chemical analysis of this woman's milk proved that every 100 grammes of it contained one milligramme of arsenic. We are not aware that there has ever been recorded a fatal case of arsenical poisoning in an infant where the mother has been taking arsenic in medicinal doses. The elimination of arsenic takes place principally through the kidneys, only a small

portion leaving the body with the sweat and bile. The various glands removing only a very fractional part. It is scarcely possible, then, that a sufficient quantity can be eliminated with the milk to produce symptoms of poisoning in the child, when the mother is taking it in medicinal doses.

THE ACTION OF THE LIVER ON ALKALOIDS.

It is several years since Schiff advanced the statement that the liver, in addition to its well-known biliary and glycogenic functions, had another in destroying alkaloids on their way to join the general circulation. At a recent meeting of the Biological Society of Paris, M. Rogers gave an account of a series of experiments he performed with the view of testing the truth or otherwise of Schiff's statements. He made experiments with cafeine, nicotine, etc., and observed that in order to kill the animals it was necesary to inject into the general circulatory system double the quantity injected into the portal system. In a normal condition he found that the portal vein carried to the liver a certain toxic alkaloid which did not reach the general circulation. M. Rogers' experiments confirm, therefore, the opinion of Schiff on this peculiar function possessed by the liver. It seems to have more influence in destroying curare than any other poisonous drug. At least, this is the most likely way of explaining the great disproportion there is between the quantities of this agent necessary to destroy life, when introduced into the stomach and when injected into the general circulation.

The liver, in addition to its power of destroying dangerous alkaloids, is also said to have the power of retaining some of them for an indefinite length of time, and thus entirely preventing their entrance into the general circulation.

THROMBOSIS.

Experimental studies upon this subject have been recently made by Prof. Eberth and C. Schimmelbusch with improved methods for observing mammalian circulation. They have established that there is an extreme degree of slowing of the blood-

current when the third corpuscular element (Blutplätchen) predominate in the peripheral zone of the vessel. This they explain on principles of specific gravity ; these bodies having nearly as heavy specific weight as the red corpuscles, and under normal conditions are confined to the axial stream. Injury to the vessel wall, even when producing visible roughening of the intima, does not necessarily cause thrombosis, for if the velocity of the current be normal, the roughened spot is bathed simply in the plasma, and coagulation only commences when slowing of the circulation brings the blood-plates to the periphery. They point out the accuracy of Virchow's view that conditions affecting the velocity of the blood-current form the essential factor in producing thrombosis.

With regard to the nature of the change which the blood-plates undergo in thrombosis, they think that the change differs essentially from that in simple blood-clotting, but are not able to state definitely the precise nature of either, merely noting that in thrombosis there is an increased stickiness, with granular degeneration of these bodies, while in blood-*clotting*, the process more resembles crystallization.

Upon all points Bizzozero's views are confirmed and extended, but nowhere contradicted.

McGill University Convocation.—The annual convocation for the conferring of degrees in medicine was held on the 29th March. The number of candidates presented for the degree was larger than in any previous year—forty-six. A full account, with lists, will be published in our next issue.

Cardiac Changes in Typhoid Fever.—A very unusual lesion has recently been pointed out by Dégérine as occurring in the muscular structure of the heart during the course of typhoid fever. On examining the heart's of two patients who died suddenly during apparent convalescence from this disease, extensive microscopic changes were detected into the myocardium. In both cases, the lesion consisted in a separation of the intercellular cement of Eberth, which, in a normal condition, unites the cells of the cardiac fibres. There was neither fatty,

putrid or pigmentary degeneration. It is due to the solvent action of sarcolactic acid, which is formed in great abundance in the intercellular cement. No bacilli were found in the myocardium. Similar changes have been detected in the myocardium after pericarditis by Lundrouzy and Renant.

AUSTIN FLINT.

Remarks to the Class in Clinical Medicine, University of Pennsylvania, by William Osler, M.D.

Gentlemen,—Since we met together on Saturday, a veteran in the army of which you are recruits, has fallen. I allude to Dr. Austin Flint of New York, and I propose, before proceeding with the clinic, to tell you, in a few words, something of his labors.

Dr. Flint graduated from the University of Harvard in 1833 or 1834, so that for more than half a century he had been an energetic and active member of the profession. Think for a moment of the extraordinary changes which medicine has undergone in that period. When he entered the ranks there was no histology to speak of; the subject of physiology had scarcely reached a distinct and definite position: cellular pathology was unheard of, Virchow had not yet arisen. In medicine, the schools of Brown and of Broussais still hampered development. In almost every department, the strides which have made modern medicine what it is, have occurred since then. Men were just beginning to see that true progress could only come by observation and experiment.

In the first place, I would refer to his work in connection with the continued fevers of this country. As you are aware, extensive contributions to the pathology and clinical history of the continued fevers, more particularly of typhoid and relapsing, were made by Dr. Flint between 1844 and 1852 or 1853. Dr. Gerhard of this city had already worked out the clinical history and distinctions between typhus and typhoid fevers, and to him is due the credit of having been the first to distinctly lay down the differences. This was in 1836, nearly fourteen years before Jenner's work. Immediately following this were

the works of Jackson and of Hale at the Massachusetts General Hospital. These gentlemen, with whom, no doubt, Dr. Flint was, as a student, well acquainted, also worked out the differences between typhus and typhoid fevers as seen in the fevers of New England. When Dr. Flint proceeded to Buffalo, he had many opportunities of studying so-called autumnal fever or typhoid, and his clinical reports on this disease are among the most valuable made by any member of the profession in this country. His account of the epidemic in a small town known as North Boston was, I believe, the first accurate and full description of a local epidemic of typhoid fever. In it he demonstrated clearly the infection of the well water and the fact that from a single case of typhoid fever imported into a village the entire community might be infected. His work in this department, though not initial in the same sense as that of Gerhard, was of great value in emphasizing the distinctions between the continued fevers.

In the second place, the work of Dr. Flint will live in his studies of physical signs presented by diseases of the heart and of the lungs; here he was an original worker. No member of the profession in this country has contributed so much in this department. In his two prize essays of the American Medical Association, 1852, he presented a large amount of valuable experimental work which had been well and thoroughly done, and the truth of many of his conclusions subsequent observers have fully confirmed. Not one of you who takes a stethoscope into his hand but is a debtor to Dr. Flint for simplifying much that was complicated in the auscultation of heart and of lungs.

In the third place, Dr. Flint has done a great work in helping us to arrive at more satisfactory therapeutical laws. In this he no doubt followed the instruction of Jacob Bigelow of Harvard, to whose teaching he probably listened, who was the author of an essay, one of the most classical in American medical literature, "On the self-limitation of disease." He laid down there that a cardinal principle in the consideration of the therapeutics of a disease was a knowledge of its natural history; that we had to know the course of a malady left to nature before we

could appreciate the action of the medicines given for its cure. At the time that Dr. Flint graduated, who would have dared to treat a case of pneumonia from its beginning to its termination without a drop of medicine? No one. The man who would have attempted it would have been looked upon as in the highest degree worthy of blame and censure, and certainly in private practice would not have had the confidence of the family for twenty-four hours; but the study of cases in hospitals, more particularly of such diseases as typhoid fever and pneumonia, left to nature, with careful nursing and diet, demonstrated that many of these diseases are self-limited and terminate naturally in a certain time, without medicinal treatment. The work of Dr. Flint in this department is of the highest value. Throughout his long career he taught constantly the necessity of the study of the clinical facts in each disease, before we draw deductions as to the action of medicines given for its cure. Not only in typhoid fever and pneumonia, but in such a disease as phthisis, he has shown that many cases are self-limited, and that spontaneous cures may occur.

For you one of the most valuable of the lessons of Dr. Flint's life is the fact that the method of his work secured his success. When he went out into what was then considered the West (Buffalo would at that time have been thought so), he took with him a good education; but what was more important, he he went out a student of Nature and a recorder of facts. In habits of the methodical study of disease he was early inoculated, probably by James Jackson, Sr., who was much influenced by the teachings of Louis of Paris, who, as you are aware, introduced what was known as the numerical system in the study of disease—noting all the facts in the different systems and organs, and drawing the conclusions from these. That system influenced Dr. Flint throughout his entire life. In his work on "Phthisis," in his work on "Continued Fevers," you will find a minute record of facts and the careful notation of every symptom connected with the disease, and when possible the post-mortem appearances. In those days there were not many advantages, even in the larger towns, for the scienti-

fic study of disease; libraries were few and the literature was scattered, but the book of Nature was open, then as now, to the student,—and what I desire to impress upon you is, that each one of you can do in his own way what Dr. Flint did in his: by the careful study of cases of disease and by the accurate recording of your facts. Never would he have occupied the position in the profession which he did had he not gone about with his note-book in hand, carefully observing and putting down facts as they came under his notice. It was in that way that he gained his vast experience, and with it the confidence of the profession and ultimately the position which he occupied in this country.

As we grow older, we do one of two things: either we progress with the times, or we stand still. If the latter, the lines of progress go by us, and to any one looking at us, we appear to recede. Dr. Flint did not stand still. In the advance of medicine he was always in the van. As new matter came up, it was carefully tested and weighed, and, when found to be based upon proper observation, accepted. So it was that in the revolution that has taken place in pathological ideas in the past ten or fifteen years, more particularly when the bacterial pathology, as it is termed, has come so much into vogue, he was one of the first in this country to give in his full and absolute adhesion to the views. His mind was eminently receptive. He did not allow it to become warped, but he retained a mental youthfulness and elasticity which was not a little remarkable in a man who had gone beyond his three-score years and ten. This it was, in great measure, which kept Dr. Flint actively at work.

If his end was sudden, it was in all respects a desirable one, and just such as he had wished for. To die in harness was a fit conclusion for a life of ceaseless work; and of this we may be certain, that so long as there are practitioners of medicine on this continent, the name of Austin Flint will be held in esteem and reverence.

Obituary.

Angus McDonald, M.D., of Edinburgh, died in that city on the 10th of February from pulmonary phthisis. By his death the Edinburgh extra-mural school looses one of its most prominent and active workers. At the time of his death he held the appointments of Physician and Clinical Lecturer on Diseases of Women of the Royal Infirmary, Physician to the Royal Maternity, and Lecturer on Midwifery and Diseases of Women at the Surgeon's Hall.

Dr. James A. Sidey, a well-known and highly-respected physician of Edinburgh, died suddenly, at the age of 61, on the 21st of February. Dr. Sidey was a great collector of works of art having reference chiefly to old Edinburgh. He was the author of two privately-printed illustrated volumes of verses enlitled *Mistura Curiosa* and *Alter Ejusdem.* He was for many years surgeon to the prison in Edinburgh.

Mr. John Cooper Forster.—We regret to announce the death of John Cooper Forster, F.R.C.S., the distinguished English surgeon, which took place on the 2nd of March. Mr. Forster, at the time of his death, was 61 years of age. Last summer he retired from the position of president of the Royal College of Surgeons, England, and took a trip to the Riviera, but increasing feebleness compelled him to return to England, and he reached home only a week before his death. He was for many years one of the surgeons of Guy's Hospital. He is the author of a well-known work on the "Surgical Diseases of Children."

Medical Items.

—A statue has been erected in honor of M. Claude Bernard, in Paris.

—Dr. J. H. Darey, who has been Resident Medical officer of the German Hospital, Philadelphia, has been appointed Medical Examiner of the Pennsylvania Railroad Relief Department. His residence is at Erie, Penn.

—The *Philadelphia Medical Times* suggests that Dr. J. M. DaCosta would be a most worthy successor to the late Dr. Flint as president of the International Medical Congress.

—Professor Stevenson has been unanimously elected Dean of the Medical Faculty of the University of Aberdeen, vice Professor Brazier, resigned.

—The Cartwright Lectures, under the auspices of the Alumni Association of the College of Physicians and Surgeons, were delivered on the 23rd, 27th and 30th ult. by Dr. William Osler of Philadelphia. Dr. Osler's subject was "Certain Problems in the Physiology of the Blood."

—Two new lectureships have recently been endowed in the University of Edinburgh. One, on Comparative Embryology, is held by Mr. G. Brook; the other, on the Philosophy of Natural History, endowed by Lord Roseberry, has, according to *Nature*, been accepted by Mr. G. J. Romanes, F.R.S.

The Modern Child's Nurse.—Lady (to applicant): What wages will you expect as nurse? Applicant: How ould is the babby, Mum? Lady: Seven months. Applicant: Widout laudanum, Mum, $2.50 a wake; wid laudanum, $2.—*Harper's Bazar.*

The Exact Name of Cocaine.—Cocaine, ecgonine, and isotropine are derived from ethyl-tetra-hydro-pyridine, just as tropine is derived from methyl-tetra-hydro-pyridine. Isotropine is the methol-ethyl-tetra-hydro-pyridine; ecgonine is the carbonic acid of methol-ethyl-tetra-hydro-pyridine; and cocaine, a di-ether of the former, is *methylic benzo-methol-ethyl-tetra-hydro-pyridine carbonate.* The sooner modern chemistry learns to give to the world their discoveries in a common-sense way, the better for themselves and the science of chemistry.

A New Feature in Webster's Unabridged Dictionary.—The publishers of Webster have recently added to the Unabridged a "Pronouncing Gazetteer of the World, containing over 25,000 titles, briefly describing the countries, cities, towns, and natural features of every part of the Globe." It covers a hundred pages.

CANADA

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Original Communications.

VALEDICTORY ADDRESS

Delivered to the Graduating Class at the Annual Convocation of the Medical Faculty of McGill University, March 29th, 1886.

By WILLIAM GARDNER, M.D.,
Professor of Gynæcology, McGill University.

Gentlemen of the Graduating Class :—It is my duty this year, on the part of the Faculty, to briefly address you on this, to you, great occasion of your attaining to the degree of Doctor of Medicine and Master of Surgery of this University. Let me, then, first extend to you our most hearty congratulations on this auspicious occasion, and to say how great an honor I feel it to be that I am thus permitted to be the first, metaphorically speaking, to take you by the hand. Believe me, gentlemen, this is no empty form of words. Who, I ask, can so heartily sympathize with you and enter into your feelings, as your teachers, who have been in your interests for years straining their energies, and have themselves passed through similar experiences. I cannot but recall how, just twenty years ago, I stood at this same platform and proudly, though, perhaps, blushingly, received my degree at the hands of the same noble, gifted, and high-minded principal who has to-day conferred on you the diplomas you hold in your hands. No words of mine are likely to influence or enhance your estimation of the value of the parchments you have thus acquired, but I cannot refrain from reminding you that this day you graduate from a school whose curriculum is unequalled in severity by that of any on this continent, and we proudly point

to the approval of a discriminating profession and public, as shown by a steadily-increasing number of candidates for our degree. The number of our students has, in the session just closed, reached a figure never before equalled.

Gentlemen, it is customary, and we believe it to be the duty of those who have been your teachers, when you are thus dismissed, when the bond which has linked us for four years as preceptor and pupil is to be severed, to improve the occasion by addressing you a few words of counsel and of warning. Success in this the profession of your choice is, of course, the object of your ambition. With all our hearts, gentlemen, we wish you that success in the best sense of the word. We have endeavored to impress you with the fact that if you are to succeed in such a sense you must deserve it. By a successful life, I do not mean that of necessity it must be a long and brilliant one. There are many obscure village practioners who, in reality, are more successful than others who seem to float on the highest wave of worldly prosperity. To the country or village practitioner are given opportunities for the development of independent judgment and self-reliance, faculties or qualities which often remain latent in his brother of the city, with ample opportunities for consultation when he is in deep water. In this way there are often developed in the country such men as we do not so often see in the city. If, in selecting the profession in which you this day graduate, you have looked to what is the true end of knowledge and work—to relieve the suffering and to minister to the comfort of man's estate, to lessen the sum of human sorrow on earth,—you have chosen a profession which yields the fullest satisfaction to your aim and the largest scope to your work. You have, during the last four years, been learning in order to act, the end of all knowledge being action, and the end of all action is to promote the welfare and the progress of mankind upon earth. In no profession are the opportunities of doing this good work so great and constant as in ours. To the least of us as to the greatest, occasions of tender sympathy and patient help occur every hour in the daily routine of our work ; and no profession therefore rests so little

for appreciation upon any adventitious circumstance of time or place, or so little needs extraneous titles of honor to give it dignity and respect. Put a doctor in the midst of the wildest savages and they will respect the medicine-man, when the lawyer's fluent sophistry and the preacher's pathetic eloquence would not gain them consideration, or even save them from death. Associations which send missionaries to the heathen constantly recognize this fact. Protected by his medical skill, David Livingstone passed unharmed and esteemed, among the savage tribes of Africa; and a much greater than he, the Divine Christ while a preacher, cultivated the character and functions of a healer of the sick.

To-day, gentlemen, you enroll in the great band of workers of our profession at a time when the position of medicine in the estimation of the race, and when its capacities for the saving of life and the relief of human suffering are far in advance of what they have ever been—far in advance of what they were even twenty years ago. If it were possible, and time permitted, it might be profitable to draw a comparison, but there is to-day neither time nor occasion. There are many important functions to perform and positions you will be called upon to fill, other than those of a strictly professional capacity. The family physician is, nowadays, often the most trusted counselor and adviser. He occupies the same position as did the priest of old. Hence, without doubt, a vast amount of influence for good, but also possibly for evil, if not properly exercised. Perhaps this is going too far; at all events, it is safe to say that the field is divided between the clergyman and the physician. You will therefore be called upon, in season and out of season, to advise individuals and families. Your ability so do this well must depend not only upon strictly professional attainments, but upon the position you have acquired in the confidence of your patients, and that will depend largely upon general culture, on knowledge of men and things rightly used. Apart from the function of adviser and counsellor in matters other than medical, the family doctor exercises a great influence upon the morals and manners of his patients. Your conduct and deportment should be that of gentlemen. Tidy and cleanly in person, in manners a pattern,

you must remember that to many families and individuals, except the clergyman, you will be the only person who has an opportunity to exercise such an influence. In your relations with your patients, you must preserve a judicious reticence. Your patients have a perfect right to demand of you that you shall keep sacred facts concerning them learnt by you in a professional capacity. There is, as you have doubtless learned, only one exception to this rule, and that is when called upon to give evidence in a court of justice. You should, therefore, carefully avoid a habit of tattling and gossiping, as being unworthy the position of a cultured gentleman, especially a physician. I am sorry to say that the habit I would caution you against, so characteristic of small minds, is one too much indulged in by members of our profession. It is easily acquired, and with difficulty lost.

An important function of modern medicine—if not the most important, certainly one steadily growing as we make progress—is the prevention of disease. You will, I hope, pardon a brief allusion to certain instances in which you may do much to prevent disease. You all know that there seems ample evidence to show that insanity is on the increase. You also know equally well that in scarcely any other disease does hereditary taint play so important a part in causation. The marriage of persons with such tendencies is therefore a most serious question. You will not always be asked your advice on such points, but it will be your duty to speak with no uncertain sound, and to give it with all the necessary tact and authority. It will, perhaps, be often without avail. In these matters few persons are disposed to look to anything beyond their immediate gratification. If it were put to two persons passionately in love with each other that they may have children, one of whom would certainly die prematurely of consumption, another become insane, and a third perhaps commit suicide, I am afraid that in three cases out of four they would not practice self-denial and prevent so great calamities, but rather self-gratification and trust " the universal plan will all protect."

You are doubtless aware of the intimate relation between the spread and prevalence of typhoid fever, cholera, diphtheria and

other diseases, and the water-supply of households and communities; and it is in the case of small towns and villages, rather than large cities, that such modes of diffusion especially obtain. Pardon me if I draw your attention to the most recent and probably the most remarkable instance ever recorded—the outbreak of typhoid fever in the town of Plymouth, Mass., during the last summer. In that town, of eight thousand inhabitants, one imimported case of the disease, by contamination of the water-supply, led to the infection of no less than one-eighth of the whole population. One thousand cases of such a disease as typhoid fever, with, let us say, a mortality of ten per cent. Try, if you can, to imagine such a calamity. Now it is from our profession, surely, if any, that the influence with local authorities, families and individuals needful to avert such disasters must come. Here, then, is an important field in which the young practitioner may do a vast amount of good to the community in which he lives and to his own reputation. I will only further, in this connection, draw your attention to the necessity for your looking to the sanitary conditions of dwellings as affecting the health of their inmates. The women and the children of the community you live in will constitute a large majority of your patients, and this not only because they are more numerous, but because, also, they live more in-doors and are much more susceptible to disease-producing influences than the adult males. On all such matters you will find a vast amount of ignorance and apathy on the part of husbands and fathers; frequently baffling, with sadness it must be admitted, the best directed efforts to counteract them. Would that more members of our profession expended their spare energies in this direction rather than in the fascinating field of politics.

I take it that the great object of you all is to obtain practice, to get patients, and this requires time. No clientèle well worth having can be suddenly obtained. A practice quickly acquired is liable to be as quickly lost. You will therefore, doubtless, have to wait. Do not allow yourselves to be deluded by instances you may hear of in which, by some lucky chance, a man suddenly works his way to fame and fortune. The celebrated English physician, Dr. Arbuthnot, is said to have suddenly

risen to fame and fortune by his happening to be at Epsom when the carriage of the Prince of Orange was upset. There is, doubtless, a small amount of truth in this and other similar instances, but for the most of you it will be but a waste of time to sit behind a brass door-plate all day long doing nothing, or even drive about in a carriage with no patients to visit. All such expedients, sometimes resorted to, generally fail. You must wait, actively working while you wait. The exact form of the work I cannot prescribe, but it may be at home, in a dispensary, a hospital, or a medical school. You must also make your labors known by medical societies, by medical journals, or by separate publication, and be prepared to have them criticized and perhaps condemned; and it is well for all of us that our work should be criticised. If there is no medical society in your town or district, one of the first things for you to do is to try to found one. While waiting for practice, and always throughout your professional career, you must read in order to keep pace with the progress of medical knowledge. It is, after all, but a small modicum that each of us can contribute to medical knowledge, but the sum of the contributions of many workers amounts to much. You must therefore acquaint yourselves with the work of others by reading books and monographs, but especially medical journals. Now the periodical literature of medicine is exceedingly copious, and sometimes of such a character as to justify the suspicion that the existence of part of it is rather for the necessities of the editors and writers than the readers. You must therefore select for this and for another reason, for to many of you money to subscribe will fail if time to read them do not. But pardon me if I say that a single useful hint well repays the annual subscription to a medical journal. I make no apology in attempting to guide your choice by advising you take, first, the CANADA MEDICAL AND SURGICAL JOURNAL, the organ of your Alma Mater—a journal of which those who conduct it have just reason to feel proud. Then you must take and read the *London Lancet*. The great ability and high professional tone of its leading articles, and the discrimination shown in the choice of other matter, give it a position without a parallel in medical journalism. The medical man who for ten years faithfully reads his *Lancet* must inevitably

be in every sense a better man than his neighbor who systematically neglects it. Of American journals, the *Philadelphia Medical News*, the *New York Medical Record* and *New York Medical Journal* ought to be selected. But to all of you who aspire to a position at all above the rank and file, who are not content with the bottom rounds of the ladder where throngs the crowd, I would say you must not be satisfied with the medical literature of our mother tongue. You must know French and German, and, if you have not hitherto acquired these languages, I would say begin now, when for a year or two most of you will have plenty of spare time on your hands. There is no use in your expecting to know anything of consequence of the intense activity in medical matters which prevails in Germany and elsewhere from translations.

It has been said that to get on in medicine capital is necessary. If by capital money is meant, then I say it is not essential. Some of the most successful men have had no money. In fact, if you have money to invest, there are many ways by which to get a better material return than medicine. The capital essential to success is brains and industry, and it may be a comfort to many of you to know that these will suffice. No doubt a little money will sometimes greatly assist, but just as often it enervates or paralyzes. In the study and practice of medicine, your tastes and objects are doubtless varied, but the great majority of you must of necessity be general practitioners. In these days of prolific specialism, some of you may aspire to special work, thinking it easy or remunerative. Well, it may be remunerative in a few instances of marked success, but that it is ever easy when successful I deny. I would further say to those of you who aspire to special practice, that if you are to be either safe or successful specialists you must first have a wide knowledge and experience of general medicine and surgery. Success in special practice depends largely on having acquired the confidence of the profession of the community in which you live, and this you cannot get without attainments which entitle you to it.

We have especial congratulations for those of you who have attained to honors and prizes. They are the fruit of

honest hard work, and we are pleased to know that the class, as a whole, approves. I beseech you, however, to avoid making improper use of them. A short time ago I was shown a country newspaper from the western part of Ontario containing a professional card which read as follows: "Dr. ———, Graduate in Medicine and Gold Medallist of McGill University." It is true that the card stated facts, and while to laymen it may seem pardonable or even justifiable to thus publicly make known academic success, from the point of view of high professional tone it must be deplored and condemned. So are all newspaper notices of medical men in connection with operations, accidents and the like. I have lived long enough in this city to watch the career of several men whose names were constantly for a time in the newspapers. None of them have attained to any position, and most of them have utterly failed.

Gentlemen, I believe I cannot better indicate the spirit by which we must be animated in practising this profession of ours than by quoting to you the following words of an eminent surgeon: "Our manners should ever be but the expression of the habitual frame of our mind; and the habit and temper of mind which should animate us in our ministrations to the sick I can in no way so well indicate as by reverently paraphrasing the words which so expressively tell us of the Divine Physician's tender care and true sympathy for us in our soul's sicknesses—namely, we must be touched with a feeling of their infirmities. The refining and elevating influence of such true sympathy will keep us from ever making our noble office subservient to any ignoble end; and though it may interfere with our becoming rich, yet it will raise us into a higher and purer atmosphere above the petty vexations and disappointments of professional life. For what if, by our work, we become neither rich in worldly wealth nor great in the world's esteem? Surely a good name is rather to be chosen than great riches, and loving favor rather than silver and gold, and though we may achieve no social distinction, we may, by the Divine help, one day find, as many have found who are now gone to their rest, that the conscientious discharge of our duty in that profession which brought us neither

wealth nor rank has been to us none other than the house of God—aye, and the very gate of Heaven."

Again wishing you a full measure of success, and assuring you of our continued watchful interest in your future career, I bid you, for my colleagues and myself—Farewell!

MALIGNANT DISEASE OF THE RECTUM TREATED BY EXCISION AND COLOTOMY.

By G. E. FENWICK, M.D., Professor of Surgery, McGill University.

(Read before the Medico-Chirurgical Society of Montreal.)

The origin of cancer still remains a mystery unsolved, and the views of modern surgeons widely differ. Some look upon the cause at the outset to be purely local, a condition in which irritation long-continued will produce an alteration or change in the structure irritated; or that some slight accident or mechanical injury will give rise to the occurrence of tumor or foreign growth, which assumes a malignant type. The evidence of the local origin is the occurrence of the tumor or growth itself, affecting, as it does, a single part or texture of the body whilst all other parts or textures of the body are in apparent healthfulness. The first indication of the disease is its local manifestation. The constitutional implication is consecutive to the local disease. The manner of dissemination of the disease is regarded as evidence of its local origin. Cancer spreads or infiltrates the tissues in its immediate vicinity, it enters the lymphatics and even the blood vessels, and is carried to distant parts in the course and by means of the blood stream. Another method of dissemination is by local contamination, by which is meant that condition in which the disease extends to contiguous structures by actual contact, a well-recognized condition described by many observers. Others, again, regard the development of the disease to be due to some ill-defined and deep-seated condition of the constitution, that there exists a prior state of the body which favors the local manifestation, and that without this predisposition no amount of local irritation or local injury will be attended in its course by the occurrence of cancerous degeneration. That this disease is local in its development can hardly be

disputed, but that in many cases there exist a constitutional predisposition due to heredity would appear to be equally true. It is more than a mere coincidence that cancer will be found to afflict many members of a family and show itself in several consecutive generations.

If it can be shown that cancer can be arrested by early surgical removal, and that no subsequent recurrence will follow, it would go far to strengthen the position of the localists. The doctrine of the local origin of cancer is of the greatest importance in a surgical sense. Logically, we must admit that if the constitutional manifestations are due to a spread of the disease through the lymphatics and blood stream, there must have been a time when the disease was purely local, and when the lymphatic vessels and blood were not affected. If, then, the disease is *ab initio* local, and that it spreads through those channels to distant parts until the entire system is implicated, the necessity for early surgical interference becomes imperative. Then, again, the constitutionalist declares that the tumor is merely an expression of a previously morbid condition of the whole system, a condition somewhat analagous to a state met with in gouty persons, in which a sudden outburst of inflammation of a joint will occur without any apparent local injury. "Something is absorbed," says Sir William Jenner, "not necessarily pus, and there is in every part a disposition, under irritation, to burst forth into cancer. A gland or other part of the body is bruised or irritated, but such bruise or irritation does not develop extravasation of blood, thickening of tissue, or formation of abscess, but will be followed by the development of cancer." The return of cancer after removal at or near the part first affected or in distant organs is advanced as evidence of the constitutionality of the disease. On this head Sir James Paget says; "I would hold that the constitutional element in the origin of cancer is strongly marked in the constancy and in the method of its recurrence after complete extirpation." That recurrence is the rule after extirpation of cancerous growths experience leads us to admit, still, however, cases do occur occasionally in which no recurrence is observed. These are looked upon as exceptional, either that the life has not been sufficiently prolonged to be a

fair test, or that the disease has actually recurred in some distant part and has escaped observation.

Cancer of the rectum appears to arise in a very insidious manner, and in many cases it is almost impossible to obtain a correct clinical history bearing upon the length of time that the disease has existed. It would appear that the earliest symptom is smarting, itching, and general discomfort about the anus. As has been remarked, the patient is constantly aware that he has a rectum and anus, and would be glad if he could dispense with them even for a time. A dull, aching pain is more or less constant, and is increased by exercise or after defœcation. This discomfort increases during the night, so that the patient's rest is broken, which has a marked influence on his general appearance. As the disease advances, the patient experiences some difficulty in obtaining relief, and if he examines his stools they will be found streaked with blood or bloody mucus, or be flattened or grooved, or exceedingly small, as if forced through a narrow or contracted opening, or else broken up into small masses or hardened concretions not unlike sheep dung, and symptoms of obstruction soon follow. There is an inability to thoroughly empty the bowel, a constant sense of something being left behind, which cannot be got rid of; this leads to straining, and blood and slime come away, which is often offensive. The external orifice, unless carefully bathed, will become tender and excoriated, and tenesmus is occasionally very distressing. In this condition the patient suffers from increased pain, sometimes of a lancinating character, a constant desire to go to stool, an uncomfortable fulness, and much wind. In this stage, diarrhœa frequently alternates with constipation. The pain now becomes almost constant, the patient looses his appetite, food, if taken in moderate quantity, appears to add to his distress, he rapidly emaciates, the pain becomes more severe and constant, requiring opiates to procure rest and sleep, the liver becomes secondarily involved, the feet and legs œdematous, and the patient sinks exhausted or through a sudden invasion of peritonitis.

The period of duration of the disease is stated to be from eight months to three or four years. In reference to this point,

much will depend on its nature and the age of the patient. If it is a fungating, soft mass protruding from the mucous surface, prone to bleed, and occurring in a young person, the downward course will be rapid. If, on the other hand, it is a superficial spreading ulcerating mass, in an individual beyond middle life or in old age, the disease may exist for months or years before the patient is released by death.

Examination of the Bowel.—In conducting an examination, the patient should be previously prepared. A dose of castor oil should be given the day before that fixed for the examination. On the morning of the examination the bowel should be well washed out by an enema. Place your patient on his left side, with his knees well drawn up; in this position fully four inches of the bowel can be reached by the finger. If you examine without an anæsthetic, and direct your patient to bear down, a little more of the bowel can be explored. Anæsthesia is, however, a great assistance, more especially in women, as with the finger in the vagina the ulcerated surface, if such exists, and is within reach, can be forced out through the anus and the character of the disease accurately made out. On introducing the finger, a belt of healthy mucous membrane is sometimes met with between the anal margin and the commencement of the morbid growth. A common situation is somewhat less than two inches from the anal opening. On examination, the mass does not always feel like a distinct tumor, but rather a thickening or hardening of the submucous tissue. The mucous membrane may be ulcerated, which is readily made out. The base feels firm and hard, and the edges raised and overhanging. This sometimes appears to be the extent of the disease. If a distinct tumor exists, this will be felt projecting into the bowel; the growth may be situated in the anterior wall or on either side, or engaging alone the posterior wall, or, again, you may have it infiltrating the entire circumference of the bowel, forming a complete annular stricture. The inguinal glands should always be carefully inspected, although in many cases these are not in any way implicated. The absence of glandular enlargement in this region cannot therefore be taken as evidence of the non-existence of malignant disease.

Treatment.—In considering the treatment of cancer of the

rectum, very much will depend on the character and extent of the disease as to what operative measure should be selected, or, indeed, whether any operation should be attempted.

From the limited experience I have had of the operation of excision, either in part or in whole, of the lower end of the rectum, I believe that in cases where the entire mass of disease can be removed, and that the disease has been seen and recognized sufficiently early, the patient will thereby be rendered more comfortable, and the progress of the disease will, for a time at least, be arrested. I cannot agree with those who boldly declare that extirpation is absolutely curable. Cancer of the rectum shows different degrees of malignancy; whilst in some, rapid recurrence is observed, in others the disease does not recur, and the patient may escape altogether. They may live in comparative healthfulness and comfort for years, and ultimately die of some other disease.

With regard to the manner of proceeding to extirpate the rectum, I have, in nearly all the cases that have come under my observation, removed the whole circumference of the bowel. In commencing the operation, I make an incision in the median line, in the male, commencing behind the bulb of the urethra, and in the female, immediately behind the fourchette, extending it through the perineum, bisecting the anus and reaching the point of the coccyx. After this first incision, all bleeding vessels are picked up with the forceps and ligatured if necessary. If the anal opening is engaged in the disease, it must be removed by a semi-circular sweep of the knife on either side, cutting into the ischio-rectal fossæ. If, however, the anus is healthy, I think it of importance to save it. The surgeon can then proceed to free the rectum, and in doing this I have usually found the finger all that was necessary. The fibres of the levator ani soon come into view; these must be divided so as to get above that muscle. Having thoroughly separated the bowel all around from the contiguous structures, I then proceed to remove it. A small segment of the gut is transfixed with a needle threaded with stout silk or thread; the portion of the bowel between the points of entrance of the needle is then divided with the scissors,

and the thread drawn through the opening. I thus have two ligatures by which I can attach the divided end of the bowel to the anus if it is left, or to the margin of the skin if the anus has been removed. In this way I proceed cutting through a portion of the bowel and stitching it to skin until I have the entire mass removed. My ligatures are so arranged as to take in any bleeding points, but if any of the straight vessels give out, the bleeding can readily be controlled. After abation of the gut, a couple of drainage-tubes are introduced to the extreme depth of the wound, and the part dressed in the usual way. Of late I have been in the habit of dusting it over with iodoform and applying a dry pad of jute, kept in position by a T bandage. The wound is kept irrigated with very weak carbolized water once or twice a day, or oftener if necessary. This altogether depends on the amount of discharge or the passage of fæces. I think cleanliness is very important in these cases. The ligatures very rarely set up any irritation, not more so than those introduced in colotomy, and the subsequent results are, so far as I have observed, more satisfactory. It is of the greatest importance to save the anus, not on account of the superficial sphincter —although I suppose it would in time contribute in restoring the power of retention of the bowel contents—but on account of its forming an attachment to the ablated bowel, and subsequently more closely resembling the natural state of the parts. The operation seems more favorable in women than in men ; it is certainly more easy of performance in the former, and it is said that this disease is more frequently met with in women than men.

With reference to colotomy in rectal cancer, I do not think it called for, except in cases of obstruction. As a means of putting the parts engaged in the disease at rest, it may be attempted, but unless there is obstruction almost complete, it will not have this effect. So far as I can judge from my own observations, colotomy has not arrested the progress of the disease. It will render the service of relieving the patient of that distressing state in which symptoms of obstruction are advancing and becoming urgent. And, without doubt, it ought to be performed when such a state exists ; but I should expect the disease to advance with gradual and steady progress towards the end.

Case I.—This was a case that came under my observation early in the year 1876. I was consulted by a medical gentleman of this city in reference to an ulcer situated on the left side of the anus, and extending up the bowel, engaging only the superficial sphinter. It was in a woman aged 58. On examination, the ulcer was about the size of a penny-piece, deeply excavated, with raised edges, the base of the sore being dry, and lacking healthy granulations. The gentleman whose case it was had regarded this as a syphilitic sore, and had made use of constitutional treatment and the application of black wash. It was very painful, and the tenesmus and straining almost constant. No benefit had followed the treatment, but rather an extension of the disease. I advised its removal with the knife. This was consented to by the patient, as her distress was very great. It was removed *in toto*, cutting wide of the disease, and going up the bowel for about 1½ inches. There was considerable hemorrhage, but we tied the vessels as we went on, and in this way saved a considerable loss of blood. It was in the days when we had not at hand the surgical appliances of the present time. This woman made a fair recovery, and the disease had not recurred at the end of two years. The subsequent history I am unable to give.

Case II.—*Cancer of the Rectum.*—Girl, aged 12 years, admitted into the hospital 7th January, 1876. From appearance, the disease was taken for syphilitic condylomata, very extensive; it presented a broad, flat, raised growth of the mucous membrane, with submucous infiltration. This condition extended up the bowel as far as the finger could reach, with intervals here and there of healthy membrane. Constitutional treatment was in this case followed up for some time, as, although there was no history of syphilis, yet the appearance of the growth was rather suggestive. The growth increased under anti-syphilitic remedies, and the entire circumference of the bowel was engaged. The discharge was constant, ichorous, and bloody. The alteratives were omitted and tonics and dieting carefully followed up. The discharge, however, continued, and produced excoriation of the anus. The disease appeared to be steadily on the increase, so that, with the view of setting the parts at rest, colotomy was performed. This gave apparent temporary relief, and before the child left the hospital all appearance of fæces had ceased to be passed per anum. The progress of the disease was not affected by the colotomy. The patient lived for some nine or ten months after leaving the hospital, and ultimately died from exhaustion or probably from organic implication. I was merely informed by

the mother that the little girl died some months after, within the year.

Case III.—*No history of Cancer in his family.*—M. L., aged 62, a French-Canadian, admitted 7th Nov., 1877. This man had suffered from piles, and 12 years previously had been treated by the application of nitric acid. About the end of June of that year he had noticed severe lancinating pains in the rectum, which increased greatly on going to stool. The difficulty he experienced in relieving his bowels was great, and for the last two months he could alone procure relief by a tepid water injection. On examination, a large cancerous mass projected from the left side and completely filled the bowel. There was every likelihood of the bowel becoming completely obstructed, and as his general condition was favorable, the operation of colotomy was recommended. This was done on the following day, 8th November. There was great difficulty in finding the bowel, which was apparently very much fixed, believed to be from extension of the disease up the bowel, engaging the sigmoid flexure. The patient made a good recovery, and lasted in comparative comfort until some time during the following spring, when he died. No post-mortem examination could be obtained. In this case colotomy was perfectly successful, and gave comfort and relief to the patient, and I think we may admit that it prolonged his life, symptoms of obstruction had become quite urgent.

Case IV., *July 22nd*, 1878.—Mrs. N., an old lady of 70 years, was reported to be suffering from dysentery. She informed me that a mass of the bowel was hanging down, which gave her great distress. There was continued and distressing tenesmus, with constant straining, and a sense of fulness and distension of the bowel. On examination, a fungous mass, ulcerated, with everted edges, was observed completely surrounding the anus. On exploration, I found the disease implicated about two inches of the anterior wall, but I could get well above the diseased tissue. I advised the operation of extirpation, and it was performed on the 6th August, 1878. The patient made a good recovery. Between three and four inches of the bowel was taken away, and the entire sphincter. The interest of this case consists in the after results. This old lady died in April of last year, 1885, having lived six years and eight months after the excision. The cancer never returned, and although she had lost the entire sphinter, yet she regained retentive power. She died, apparently in a faint, from supposed heart disease. No post-mortem examinaation was held.

Case V.—Mr. A., a farmer, a tall, gaunt man, aged 56, consulted me in January, 1880. He had suffered from symptoms of what was supposed to be piles for some five months. After preparation, an examination was made, when it was found that the entire circumference of the bowel was engaged in cancerous ulceration, being more largely situated at the anterior part. The finger could be passed well above the diseased mass, where the mucous membrane felt healthy. Excision of the end of the bowel was recommended, and the operation performed in due course on Thursday, 22nd January, 1880. About 3½ inches of the bowel was extirpated in separating it from the bladder one seminal vesical was engaged apparently, and was removed. In this, as in the former case, the bowel was brought down after ablation of the disease, and stitched to the skin of the buttock, around where the anus had been. The man made a good recovery, and lived in comparative comfort for three years after. He came occasionally to Montreal to see and consult me, but ultimately the disease returned higher up, most likely engaging the liver, and he died, as I was informed by his physician, worn out, but with no difficulty in the bowel.

Case VI.—An American, admitted into the General Hospital with cancer of the anterior wall of the rectum, and apparently infiltrating the urethra and upper part of the prostate gland. An attempt was made to relieve him of his difficulty, and the disease was removed, but the subsequent irritation of the bladder was such that he died from exhaustion several days after the operation.

Case VII.—R. M. D., aged 48, sent to me by my friend Dr. Alloway in November, 1883. The following history was elicited: The patient had been suffering for some months from pain and difficulty in evacuating the bowels. He stated that for upwards of six months he had not passed a satisfactory stool. There was a sense of continued fullness about the rectum. This would give rise to considerable straining, frequently repeated during the day, when a small evacuation would follow, sometimes liquid, but more often in small, hard, dry masses, always mixed with blood, and sometimes blood apparently pure, and in considerable quantity, would be passed. There was a dull, aching pain occasionally, but not constantly, and a continued discharge of slimy mucus. The day following his admission to the private hospital, or on the 25th November, 1883, an examination was made, the bowel having been previously well washed out, when the following condition was found to exist: Along the posterior wall, and

about two inches above the anus, the finger encountered a projecting growth, circular in form, and in size about that of a half dollar; there was a narrow constricted neck, and from the upper free surface there appeared to sprout a fungous, soft mass not unlike the head of a mushroom; a second growth, the same in character, but somewhat smaller in size, was noticed a short distance above, quite in reach of the finger; and beyond, the mucous membrane felt soft and healthy. The submucous tissue in the vicinity of these tumors seemed to be thickened and infiltrated; the fungus mass readily broke down and bled freely when roughly handled. On the following Tuesday, 27th November, I proceeded to remove these tumors in the following manner:— The patient having been previously prepared and placed under ether, he was tied in the usual lithotomy position. The anus appeared to be in a healthy state. An incision from its posterior margin was then carried backwards to the point of the coccyx, dividing the superficial and deep sphincter; a large-sized Sims' speculum was then introduced, and the front wall of the rectum raised and drawn forward; the entire mass of the disease was thus brought into view. The mucous membrane and submucous tissue was then slit up, cutting wide of the disease and going well above it. The entire mass, with the submucous tissue, was removed with the scissors. The hemorrhage was very considerable; the vessels appeared to be large, and could not be seized by the forceps, so that a needle, double-threaded with stout hempen thread, was passed beneath the base of the situation of the tumors and a ligature tied on both sides. This completely arrested the bleeding. The divided margin of the bowel above was then brought down and stitched to the margin of the divided anus. The posterior incision was left to granulate and contract. The patient made a good recovery, and as the tumor, on examination by an expert, was pronounced a villous growth and probably non-malignant, I had every hope that the relief would be permanent. Before the end of January the wound had quite closed, and he had control over the bowels and retentive power. This patient, however, consulted me again in January 1885, and on examination, the anal opening was found very much contracted and surrounded by several hard nodular masses which resisted the introduction of the finger. On getting well into the bowel, the front wall was found engaged in the disease; it did not appear to be very extensive, as healthy tissue $2\frac{1}{2}$ inches up could be readily reached. He was in great distress, as the symptoms of obstruction were marked. He was unable to get anything away except with a warm-water enema, and then the relief was

but temporary. These symptoms had but recently set in ; up to the end of November he had enjoyed comparative comfort. In consultation with my colleague, Dr. Shepherd, we determined that one of two things had to be done,—either perform colotomy or remove the lower end of the rectum. As the disease appeared to be limited to the lower portion of the bowel, it was decided to recommend its removal, and if the disease returned, which in all likelihood it would, colotomy could subsequently be resorted to. The operation was performed on the 19th January, 1885, or about fourteen months after the first operation. On this occasion the entire circumference of the bowel was removed. The bowel freed from its attachments was brought well down, and after ablation the stump was stitched to the edge of the integument. He made a rapid recovery, and left the hospital at the end of three weeks. At this time he had partial retentive power, was sensible when the bowels were going to act, and could delay it sufficiently long to enable him to make suitable preparations for cleanliness.

I find, on reference to my note-book, that this patient returned in August suffering from symptoms of obstruction. He was greatly changed ; from being a stout, robust man, he had become emaciated, and presented a well-marked cachectic appearance. The disease had returned, and had almost closed the outlet. Colotomy, as a palliative, was recommended, and performed on the 27th August. This gave him great relief, as before it the sense of distension was distressing ; without doubt it prolonged his life in comparative ease, but he gradually sank and died on the 27th December following, or four months after the last operation.

Case VIII.—Mrs. C., aged 45, a tall, spare woman, consulted me on the 19th January, 1886. She gave me the following history : For several years she has been of a constipated habit, and had required the use of aperient remedies to obtain relief. Towards the end of July last she experienced great distress ; she had no expulsive power, as there appeared to be something in the bowel which she could not get rid of. This feeling of fullness gave rise to straining and spasm, which was painful ; occasionally she would pass blood in some quantity and sometimes small hard, dry masses, and occasionally had diarrhœa. Her physician had made an exploration with the finger, had pronounced it to be a case of internal piles, and had given her a sulphur and cream of tartar electuary, with some ointment to

be introduced into the bowel. This treatment gave her temporary relief. For the past two months she had not noticed anything like a natural stool; little, round hardened masses would come away, leaving behind a burning, smarting pain extending up the bowel and radiating down the thighs, which would persist for an hour or so after going to stool. There was a discharge of bloody mucus, which had somewhat increased of late.

After due preparation, an examination was made under ether. The anus appeared quite healthy; there was no evidence of external hemorrhoids. On passing the finger into the bowel, the mucous membrane seemed to be quite healthy for an inch and a half above the verge of the anus; the finger then came upon a nodular surface, hard, resisting, and in ridges. The mucous surface felt raw and eroded. This was situated in the front wall, and could be felt distinctly through the vagina. The vaginal membrane appeared quite free, and did not seem to be implicated. With some little trouble the ulcerated mass was forced out through the anus and brought well into view; this aided materially the diagnosis. The finger could be passed well above the ulcerated mass, and the bowel felt quite healthy. There were two enlarged glands observed beneath the mucous membrane, but the finger could be passed well above, where the membrane felt quite soft and healthy. It was determined to recommend removal of the lower end of the bowel, and the operation was performed in the following manner on the 3rd of February, 1886:—The patient, being etherized, was placed on the table in the lithotomy position. The anus not being implicated, it was decided to save it. The incision was commenced immediately behind the fourchette, in the raphé, and carried backwards to the point of the coccyx. This incision bisected the anus, and on separating the flaps the extent of the disease outwards could be readily seen. The next incision divided the bowel on either side into the ischio rectal fossæ; this was carried well to the inside of the superficial sphincter, but wide of the diseased structure. This appeared to be of advantage, as no skin was sacrificed, and it aided materially the subsequent steps of the operation. The front wall of the rectum was now separated from the posterior vaginal wall its entire extent, until the serous fold was reached. This part of the operation was accomplished with the finger alone; the parts separated without much difficulty, but it had to be done with care, as the thin vaginal wall would readily tear. This, unfortunately, did occur, and had subsequently to be closed with catgut sutures. The posterior attachments were then separated, and the levator ani fibres

on either side were divided with the scissors. The bowel was now free and could be drawn down, and was divided with the scissors, and as divided it was attached to the skin of the anus by four sutures on either side. There was very little hemorrhage, as the vessels were picked up as divided and, when necessary, ligatured with fine catgut. The fold of the peritoneum, where it comes down between the rectum and vagina, was freely exposed, partly detached from its rectal surface, and pushed back. This was effected without damage to that membrane, as the loose connective tissue readily separated. Large-sized drainage-tubes were introduced both in front and behind to the full depth of the wound; two stitches were introduced in the perineum and brought the parts well together. The parts were well dusted with iodoform and dressed with dry lint and a pad of marine tow, the dressing held in position by a T bandage. The operation was tedious, as at certain stages great care had to be exercised. The separation of the bowel from its attachments was effected with the finger and a few snips of the scissors; fully four inches of the bowel was removed, extending well above the implicated surface.

Evening, 9 *p.m.*—Patient quite recovered from the ether; is comfortable; complains of slight smarting about the wound, but it is not distressing. Pulse 88; temperature 99°. The nurse was instructed to remove the urine with the catheter. Patient had taken a little iced milk, but did not care to take much; she was nervous, and not inclined to sleep, so that ¼-gr. of sulph. morphia was given hypodermically.

Feb. 4th.—Passed a good night, felt well and refreshed. Temperature 98°; pulse 76. The case progressed rapidly towards recovery. The temperature never rose above 99.4°; this was on the sixth day, and was apparently due to the irritation of the stitches, several of which were removed. The parts closed rapidly, and she left the hospital for her home on the eighteenth day after the operation. At that time she was aware when the bowels were going to act, and could make preparations.

I have since heard from this patient. She is improving in health and general condition. I shall watch the results with interest.

I have to acknowledge the kind assistance of my colleagues, Drs. Roddick, Shepherd and Bell, who were present and gave valuable aid and advice throughout this case.

AN ACCOUNT OF A CASE OF INTERMITTENT EPIDEMIC CEREBRO-SPINAL MENINGITIS.

By A. WORTHINGTON, M.D., of Clinton, Ont.

(*Read before the Canada Medical Association, at Chatham, Sept'r 3rd* 1885.)

Mr. President and Gentlemen:—It is with considerable hesitation that I venture to come before you with the report of a single case of disease. Cases of this kind appear to be exceedingly rare, as Niemeyer mentions having seen only one case in his large experience, and this one of the third form of Hirsch. The disease in question is classed by Niemeyer, Ziemssen, J. Netten Radcliffe and Williams as the *intermittent* form of epidemic cerebro-spinal meningitis. Williams, in his excellent work on continued fevers, very briefly reports one case from Ziemssen. It does not appear to me that the case which I am about to report belongs strictly to any of the forms mentioned. It is certainly not epidemic. There was spinal complication, but of a mild form. The length and completeness of the intermissions are unlike any historical account of the disease I have been able to find. Niemeyer says: "Lastly, I must mention the occasionally intermittent course of the disease. I have only seen one case. Hirsch distinguishes three forms of the intermittent course. In the first, it only occurs in the first stage; one or more attacks of evident premonitory symptoms pass away, but another follows, which is immediately succeeded by the outbreak of the disease. In the second form, there is a sudden remission of the symptoms; these again grow worse the next day, and occasionally this alternation occurs several times, usually with a more or less quotidian type. In the third form, which is by far the most frequent (to which my case belonged), perfect intermissions are seen during convalescence. The symptoms remaining after the disease, particularly headache and stiff neck, regularly increase very considerably for some time, usually with a quotidian type, while in the interval the patient feels quite comfortable." Ziemssen has seen more of this class of cases than probably any author mentioned. The following case, transcribed from his work by Williams, is so brief that a true view of the disease is scarcely obtained:

"CASE IV—*Intermittent form.*—Th. M., æt. 19 years, student. Prodromata for eight days. Access abrupt, with cephalalgia, vomiting, slight convulsions, unconsciousness. Neck somewhat stiff. No fever during the first few days. Exacerbation on the fourth day, with fever of short duration, followed by apyrexia and disappearance of the malaise. On the fifth, seventh and eighth days the exacerbations occurred, with marked spinal symptoms. Then followed daily exacerbations, but of less intensity and shorter duration. No eruption. Complete cessation of febrile attacks after the eighteenth day. Recovery. Duration of disease, six weeks; of convalescence, four weeks."

Dr. Williams then observes that "in these cases the thermometer by no means shows the regularity that characterizes malarial fevers or that a superficial study of the symptoms would indicate. True intermittence, in the sense that the term carries when applied to ague, does not belong to cerebro-spinal fever."

J. Netten Radcliffe says: "The course of the disease has also been complicated by the supervention of other maladies—intermittent fever or certain paroxysmal phenomena simulating malarious poisoning, a complication which has led to erroneous notions of the nature of the disease. In the outbreak on the Lower Vistula, cases were observed in which regular or irregular intermissions took place that could not be assigned to a malarious origin."

Other authors mention the intermittent form, but I have not been able to obtain an extended report except the brief one mentioned. The duration of the attack in the following case was such that too much of your time would be taken up if the notes of the case were given in full. I therefore abridge by dividing the report into weekly periods:

W. K., aged 41, very stout and exceedingly corpulent, weighing 225 lbs.; generally very healthy; family history good. No history of malaria. Occupation, dealer in lightning-rods and general trading in the winter. He was constantly on the road during the very cold and stormy weather of last winter, and wore only heavy woollen overclothing and cotton underwear. He came to my office on the 17th February very cold and so much exhausted that it was with great difficulty he could walk home, about half a mile. Found him next morning in great pain in his back and limbs, and general uneasiness. Pulse 80; temperature 100⅘°. *19th*, 9 *a.m.*—Pulse 86; temperature 101°.

Anticipating an attack of acute rheumatism, I prescribed salicylate of soda, which kept him perspiring profusely for two days. On examining his chest, considerable effusion had developed in the right pleural cavity. About 4 p.m. on the 20th he had a severe rigor, lasting nearly two hours, accompanied with violent pain in his head, extending to the neck. Pulse 94 ; temperature 102½°. Applied ice-water and gave aconite. 7 *p.m.*—Is more comfortable. 21*st*, 9 *a.m.* —Is worse. Pulse 98 ; temperature 102⅘°. Ice in a bladder applied last night, and the second bladder of ice put on to-day. The pain in his head he says is nearly unbearable. 22*nd*, 9 *a.m.* —Pulse 92 ; temperature 102⅕°. Had his hair closely cut yesterday. 23*rd*, 7 *p.m.*—Pulse 90 ; temperature 99⅘°. His head is his continual complaint, the pain being described as terrific—boring, bursting. 24*th*.—Had a rigor early this morning. His pulse ranged for the second week between 80 and 112 in the morning, and between 126 and 98 in the evening; temperature between 102⅘° and 97⅕° in the morning, and between 103⅗° and 100⅘° in the evening. His bowels were obstinately constipated throughout his sickness, and required constant attention. The intermittent and paroxysmal character of the disease began from the first and continued to the end. The paroxysms were very uniform in their approach and progress. The pain first began in his head and continued to increase for a variable period from one to three hours, when the cold stage commenced and continued from a few minutes to between seven and eight hours, then came the pyrexial stage, lasting from three to twelve hours, the pain, fever and pulse rate increasing until the acme was reached, when all declined together to near the normal condition. The temperature during the paroxysm was never so much affected as the pulse, except on two or three occasions, when it rose to 104. The pleuritic effusion gradually disappeared. There was no sweating stage connected with the paroxysms during the attack. Had a chill early on the morning of the 25th, and double vision on the 26th, and for several days after which it disappeared. On this morning there was great prostration, subsultus tendinum, and heart failure. Ordered half an ounce of brandy every three hours, with quinine every three hours, and plenty of nourishment. On the 28th, had a severe rigor, lasting three hours. Bottles of hot water were placed around him, while the bladders of ice were continued to his head to relieve the agonizing pain ; these probably helped to prolong the chill. Blisters were early applied to the neck and spine, and continued at intervals throughout. His tongue, at first white, then a dirty white, began to clean slightly. Had a moderately cold spell on

the 1st March, and another on the 2nd, of three hours' duration. His intellect has been clear up to this time, except during the height of the paroxysms. I may remark here that after the occurrence of the cold stage, which is always followed by fever, there is an entire intermission, the pulse declining and temperature falling to usually below normal. During the fourth week, the pulse ranged from 74 to 100 in the morning and 84 to 90 in the evening, and temperature from $96\frac{4}{5}°$ to 100° in the morning and $97\frac{4}{5}°$ to $102\frac{1}{5}°$ in the evening. The highest and lowest pulse rate and temperature are given in each week. Began to get cold about 6 p.m. on the 4th, the paroxysm ending at midnight. 8*th*, 9.30 *p.m.*—Pulse 78; temperature 97°. At 11.45, Dr. Williams saw him. Temperature $96\frac{4}{5}°$; pulse 75. No pain in his head nor anywhere else, but feels very weak. Had a short cold stage, varied with flushings of heat, for two hours on the 8th, and another on the 9th, lasting between three and four hours, but at evening the paroxysm was over. Pulse 74; temperature $98\frac{2}{5}°$. Slept well all night. At 7 next morning (10th) the cold stage began, and did not end till 11 a.m. Pulse 86; temperature $99\frac{1}{2}$. At 12.30, pulse 115; temperature 103. At 1.30, pulse 112; temperature $102\frac{3}{6}°$. Is exceedingly restless, turning from side to side. Terrific pain in his head; feels as if it would burst. 7 *p.m.*—Pulse 98; temperature $99\frac{4}{5}°$. Some pain in the back of his head, also along the spine, yesterday and to-day. The day and night of the 11th were so severe that I continue the notes. He wished a change to hot applications to his head, thinking it might benefit him, and they were tried, with bad effects. 9.50 *a.m.*—Pulse 80; temperature $97\frac{2}{5}°$. Passed a good night; took $\frac{1}{4}$-grain of morphia and slept well after the second dose; feels much refreshed this morning. 5.30 *p.m.*—Pulse 96; temperature $103\frac{2}{5}$. Pain began about 1.30 p.m. and the cold stage at 2.30; bottles of hot water were placed all around him and his head bathed with tepid whiskey and water. At 5.30, began to apply hot water cloths to his head, and gave 10 grs. quinine; at 6.15 the chill ended. 6.30 *p.m.*—Pulse 110; temperature $103\frac{3}{5}°$; his head feels a little better. 7.30 *p.m.*—Pulse 112; temperature $102\frac{1}{5}°$; mind is wandering, but answers correctly. His hair has been closely cut to-day, and his head painted three times with Tr. Iod. Co. Is very restless, and thinks he cannot live; later, he became unconscious, and remained so until morning, tossing from side to side all night. When reason had returned, he thought he had passed a good night. Examined his urine; specific gravity 102-3, no albumen. Blood much changed; some of the red corpuscles appear large and flabby, others small and crenated; no rouleaux

found, but they aggregated into heaps and masses; to appearance, there was no marked diminution in number; there was some increase in the number of white corpuscles, and many were increased in size. 15*th*, 7.30 *p.m.*—Pulse 72; temperature, $98\frac{2}{5}°$; has passed a good day, sleeping (probably some stupor) several hours. Is quiet, and answers correctly, but his mind wanders if left to himself. Ice-water reapplied. Chill on the 20th for two hours. Slight dilatation of the pupils. Temperature up to 104° on the 21st, at 8.45 p.m. Is taking ergot and pot. iodid. 23*rd*.—Rigor for $4\frac{1}{2}$ hours, the paroxysm ending at 7.30 p.m., and he passed a good night. No chill again till the 30th. The pulse has been for this week from 78 to 84 in the morning and 78 to 120 in the evening. No delirium since the 22nd. There was a slight cold spell on the 30th. The pulse and temperature are for the seventh week: Pulse 68 to 80 in the morning and 70 to 88 in the evening; temperature from 97 to $98\frac{1}{5}°$ in the morning and 97 to $100\frac{1}{5}°$ in the evening. On the 4th of April the following entry occurs: Noon, pulse 68; temperature $97\frac{2}{5}°$; has neither ache nor pain, and feels splendidly. Had a slight cold spell in the forenoon of the 7th, also the same in the afternoon. On the 5th (Sunday), contrary to orders, several parties were allowed to see and talk with him, since which he appeared gradually to relapse. He told me on the 12th that his sexual appetite for the last two weeks had been strong, and that he had several times had sexual intercourse with his wife. Was there a temporarily exalted condition of that portion of the brain governing that propensity? I once before had a patient with chronic trouble of the brain, in which the patient insisted on sexual intercourse every night for some weeks. These are the only cases of the kind I have ever seen. For the eighth week the pulse-rate and temperature are: Pulse 74 to 88 in the morning and 84 to 92 in the evening; temperature from $97\frac{1}{5}°$ to $98\frac{4}{5}°$ in the morning and $97\frac{4}{5}°$ to $100\frac{1}{5}°$ in the evening. Had a chill on the 9th, lasting four hours, the paroxysm ending at 8 a.m. on the 10th. *April* 11*th*.—The fever came on to-day without the usual cold stage, and at 11 p.m. the pain was so terrible that he thought his head would split open. The treatment thus far has been supporting, in the best possible manner—brandy and milk, egg-nogg, beef-tea, etc. The remedies have been quinine, arsenic, iodide and bromide of potass., mercury to touching the gums, opium and chloral hydrate. For the ninth week the pulse-rate and temperature are: Pulse 83 to 112 in the morning and 80 to 112 in the evening; temperature 97 to $102\frac{4}{5}°$ in the morning and $97\frac{2}{5}$ to $102\frac{3}{5}°$ in the evening. A chill occurred on the 15th, lasting four hours; another on the 17th,

of three hours, and one again on the 18th, of two hours' duration. *There are, after nearly all the paroxysms, perfect freedom from fever and pain in the head for a variable period.* During the tenth week the pulse and temperature are: Pulse 78 to 108 in the morning and 76 to 100 in the evening; temperature 98 to $102\frac{1}{5}^{\circ}$ in the morning and 97 to $102\frac{1}{5}^{\circ}$ in the evening. A cold stage not amounting to a chill came on the 21st, remaining three hours; another on the 22nd, another on the 24th, and another on the 25th, of $4\frac{1}{2}$ hours, and still another on the 27th, of one hour. There is considerable muscular tremor, and the voice is tremulous. To have 4-grain doses of quinine every four hours. There has been occasional vomiting up to the present, more frequent now, and his mind is wandering more or less. The pulse and temperature for the eleventh week are: Pulse 75 to 92 in the morning and 74 to 104 in the evening; temperature $97\frac{1}{5}$ to $98\frac{2}{5}^{\circ}$ in the morning and $96\frac{4}{5}$ to $101\frac{3}{5}^{\circ}$ in the evening. *28th.*—A cold stage of $4\frac{1}{2}$ hours came on to-day, and another of $7\frac{1}{2}$ hours on the 30th. On the 2nd of May he had a mild paroxysm; mind wandering more or less, and during pyrexial excitement there is a good deal of stupor, and he is not cognizant of anything. Respiration is irregular, and the eyes open and close with each respiratory movement, and an occasional expiration is puffed out. For the past week there has been, with each paroxysm, more or less vomiting. Is more prostrated than at any previous time, but so far has been able to take nourishment sufficient to sustain him. The pulse and temperature for the twelfth week are: Pulse 70 to 98 in the morning and 72 to 108 in the evening; temperature 97 to 102° in the morning and $97\frac{2}{5}$ to $101\frac{2}{5}^{\circ}$ in the evening. On the 9th May, a cold stage lasting two hours came on, with vomiting; another, on the 11th, of an hour. Considerable delirium, but answers correctly when spoken to. There is much stupor, and it seems difficult for him to comprehend. Pulse and temperature for the 13th week are: Pulse 76 to 99 in the morning and 76 to 92 in the evening; temperature $97\frac{1}{5}$ to $100\frac{1}{5}^{\circ}$ in the morning and $97\frac{1}{3}$ to $100\frac{1}{5}^{\circ}$ in the evening. Had a short cold stage on the 13th, with such forcible efforts to vomit as to nearly bring on convulsions. After the 15th, the stupor seemed gradually to deepen. Had a cold spell on the 19th, from 6 a.m. to 7.20 a.m. Vomiting is very frequent and severe. Takes nourishment fairly. For the ten remaining days the pulse and temperature are as follows: Pulse 72 to 110 in the morning and 82 to 108 in the evening; temperature $97\frac{1}{5}$ to $100\frac{3}{5}^{\circ}$ in the morning and $91\frac{3}{5}$ to 100° in the evening. The patient passed from my care on the 28th May,

and died comatose on the 31st. Duration of my attendance 100 days, and of his sickness 103 days. Perhaps the singular uniformity of the temperature in this case from beginning to end will be better understood by giving the average temperature during each week, both morning and evening. I have omitted the first week :

	Morn.	*Eve.*		*Morn.*	*Eve.*
2nd Week....	101⅜°	99¼°	9th Week....	99⅕°	100⅕°
3rd "	99⅕°	101¼°	10th "	99°	100°
4th "	98⅖°	100⅗°	11th "	97¼°	99⅕°
5th "	98 1/10°	100°	12th "	98⅕°	99°
6th "	98⅕°	98⅗°	13th "	99°	98⅘°
7th "	97¾°	98⅖°	14th "	98½°	99°
8th "	98½°	99⅕°			

Etiology.—W. T. Grimshaw, an able writer on this subject, states that this disease (epidemic-cerebro-spinal-meningitis) is very rare after 40 years of age. In this case it cannot be called epidemic, as no other cases have occurred, and the cause may, I think, without question, be traced to exposure. He was a very energetic and determined man in his business, and he allowed no condition of the weather to stop him. No post-mortem was made, which in this case is a calamity to the progress of medical science, and an opportunity lost which may not again occur for many years. If a careful anatomical and histological examination of the brain and meninges could have been made, some light might have been thrown upon this rare form of meningeal inflammation, and it is just possible that a thorough use of the microscope might have given a clue to the condition of the brain producing intermittence, if examined to that end.

THE CARTWRIGHT LECTURES.

Abstract of Three Lectures on "Certain Problems in the Physiology of the Blood,"

Delivered before the Alumni Association of the College of Physicians and Surgeons, New York, on 23rd, 27th, and 30th March, 1886.

By WILLIAM OSLER, M.D.,
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Lecture I.—The so-called Third Corpuscle; the Blood-plate of Bizzozero, the Hæmatoblast of Hayem.

Among the problems which are yet open to physiologists, there are interesting ones still which center aroand the blood-corpuscles. In no department of physiology has so much time and labor been expended, and with so little positive result, as upon the origin and life-history of the corpuscles. The work of the last few years has been occupied largely in two directions: 1. To prove or disprove the existence of a third corpuscle. 2. Upon the degeneration or regeneration of corpuscles.

The present lecture is to be occupied with certain statements concerning the third corpuscle—the so-called corpuscle of Hayem. This body has received various names, having been called *elementary corpuscles* by Zimmerman, *hæmtoblast* by Hayem, and *blood-plate* or *plaque* by Bizzozero. The term *disklet* has also been suggested. Blood-plate and blood-plaque are now accepted, however, by the greater number of investigators, notably by Kemp and Martin, who have offered the most recent contribution to the subject, and those names are likely to be constant. The body in question is a colorless plotoplasmic disc measuring from 1·5 to 3·5 micro-millimetres; in exceptional cases it has been found as large as 5·0 or 6·0 micro-millimetres in diameter. Its ratio to the red corpuscles is 1 to 18 or 20, and, when withdrawn, the individual corpuscles quickly adhere or *conglutinate* (as it has been technically termed) in large numbers, thus forming the well-known granule-masses of Schultze, which are altogether too large to pass through capillary vessels. Norris has maintained that these bodies are identical with the *invisible discs* which were described by him. This is denied, and the opinion is advanced that the *invisible discs* are only decolorized red corpuscles. If the blood-plaques are studied without the use of reagents, no satisfactory results will be ohtained, for they will quickly coalesce and disintegrate. They may be seen, however, as small grayish granule-masses, with projections of fibrin filaments in some cases, the masses being of from ten to fifteen times the size of the red corpuscle. The masses are made up of small bodies of uniform size which, when seen in face, have a discoid or ovoid appearance, but in profile resemble a straight rod, which is sometimes clubbed at both ends. These masses are not seen within the vessel, but only in blood which has been withdrawn. The corpuscles are best studied in a one-per-cent. solution of osmic acid, or in Pacini's fluid. The method of preparing the specimen is to place one drop of the osmic acid solution, or the Pacini fluid, upon the fingertip, then plunge the finger through the solution, allowing a small drop of blood to mix with it, and then place the specimen upon the slide. Bizzozero uses the common saline solution of the laboratory, adding a

small quantity of methyl violet as a stain. If the investigation is carried on in the living animal, it (the animal) should be under the influence of chloral, and with a slow blood-current. The vessels of the omentum in very young animals may then be studied, and the vessels in the subcutaneous connective tissue of the tail of a rat one or two days old are specially recommended as furnishing excellent opportunities for this purpose. The subject may also be satisfactorily investigated in the tissue from human beings, and in tissue which is removed from dead bodies, if taken very soon after death.

The corpuscle is a homogeneous, structureless mass of protoplasm, without distinction of center and periphery, without color or nucleus. Sometimes one sees a dark peripheral portion, like a thickening of that part, but, when viewed from other points, this peculiarity is found to be only apparent. A marked peculiarity of these bodies is their tendency to cohere immediately after the blood is drawn, thus forming Schultze's *granule-masses*, and this process is analogous to the nummulation of the red corpuscles. Another noteworthy fact is that the corpuscles sometimes remain isolated, instead of cohering, such a condition having been observed in blood which has been drawn from patients with malignant fevers, smallpox, etc. This fact also has its analogue in the less positive nummulation which obtains with the red corpuscles during the same diseases.

The plaques may also become crenated, a change which is believed to be physical and not amœboid. This phenomenon will be seen most satisfactorily if fresh-blood serum is added to the specimen. The number of these bodies is difficult to ascertain. Hayem has placed it at 250,000 to 300,000 to the cubic millimetre, and in conditions of disease, as well as in the blood of the new-born, it may be 500,000 or more. The methods of estimation are believed to be, as yet, inexact, and hence all statements as to the number must be taken as merely approximate. The chief cause of difficulty in numerical estimations lies in the fact of the tendency of the bodies to collect and cohere at the sides of the vessels and upon any substance which may be interposed. The plaques are much more abundant, as already stated, in a diseased than in a healthy organism. They have been found specially abundant in cancer and other diseases in which there is a marked cachexia, and in the latter stages of pulmonary consumption. So noticeable is their presence in the last-mentioned disease that they were for a while supposed by some investigators to be a peculiar product of that disease. On the other hand, they are not increased in number during acute pyrexia, but during convalescence the increase is quite noticeable.

As to their presence, it is believed that it is constant in mammals, especially in the young. In oviparous vertebrates an analogous body has been found, but it is nucleated. The opinion has been advanced that they are not independent and original bodies, but are due to the disintegration of white corpuscles. Objections to such an opinion are: 1. I have never found that the white corpuscles disintegrate with such rapidity as to form bodies like these. 2. They can be demonstrated and fixed by the osmic acid method. 3. They have been repeatedly seen in the circulation of the living animal—in the omentum of the guinea-pig, etc.

The history of this body is comprised in three periods. The first includes the time previous to 1877-78, in which observations were made by Donné, Zimmerman, Erb, and others. In 1874 I called attention to the fact that the *granule-masses* of Schultze did not assume that form until after the blood had been withdrawn. The second period

was in 1877-78, when Hayem demonstrated that a third corpuscle, which he termed *hæmatoblast*, did exist, but his work excited little attention either in Germany, in England, or in America. The third period began in 1882, when Bizzozero published his paper confirming Hayem's statements as the result of his investigations. Since that time about twenty different articles upon this subject have appeared and confirmed the account which was given by Hayem. Schmidt and his followers, of Dorpat, are the only notable dissenters from those views.

Lecture II.—Degeneration and Regeneration of the Corpuscles.

Much labor has been spent in the past ten years in investigations concerning the degeneration and regeneration of the blood-corpuscles. These changes may be due to the increased destruction of the corpuscles from fever, poison, hæmorrhage, etc.; or to primary changes in the blood-forming glands; or as the secondary effect of imperfect nutrition.

The anæmia which is the result of hæmorrhage furnishes an interesting study concerning the degeneration of the corpuscles. The most important change in the corpuscles which occurs after profuse hæmorrhage, whether in man or in animals, is a change in their size. This change does not occur solely after hæmorrhage, but may proceed from a variety of causes. The normal size of the red corpuscle in the adult human being averages 7·5 mmm. in diameter. According to Hayem, normal corpuscles (red) should be divided, with reference to their size, into three grades—those which are under 7 mmm. in diameter, including about 12 per cent. of the entire number; those which are about 7 mmm. in diameter, including about 75 per cent.; and those which are larger than the ones just mentioned, and which include the remainder. In anæmia one finds many very small and some very large corpuscles, the size varying between 2·5 mmm. and 12 to 15 mmm. This subject of the variation in size of these bodies is termed by Quincke *poikilocytosis*, and has been elaborated by him under that term. The very small corpuscles are termed microcytes, and may be found in abundance in the dog a few hours after induced loss of one quarter or one third of the total blood-supply. They are also found as a rule in all cases of profound anæmia, exceptions occurring in certain cases of cancer and pulmonary consumption. It is now known, however, that they are not distinctive of pernicious anæmia, as was held by certain writers in 1876, on account of their almost constant presence in that condition. They vary in number in the different forms of anæmia, being most abundant in idiopathic or pernicious anæmia. The question naturally occurs, Are these microcytes bodies which are in the course of development or regeneration, or are they fragments of bodies which are undergoing degeneration? According to Hayem, they are one step in advance of the *blood-plaque*, but it may be considered more probable that they are fragments, which have become separated as the corpuscles become irregular and crenated, and are afterward discovered in the field of the microscope.

Very large corpuscles, or megalocytes, are also found in splenic and idiopathic anæmia, especially if the anæmia follows hæmorrhage. They may be 12 or 14 mmm. in diameter, are usually neither spherical nor bi-concave, but flatter and more irregular than in the normal condition. Their outlines vary very much, being very irregular, while normal corpuscles are very regular in outline. The opinion is advanced that the changes may be due to changes in the serum, and the use of Pacini's fluid may produce such an effect. In animals from which a large quantity of blood has been taken it has been

observed that there is also an increase in the number of white corpuscles, though no particular changes have been noted. In induced anæmia the blood-plaques are also increased in number and in size. In anæmia, too, nucleated red corpuscles are found (which are normal, though rare, in the blood of the embryo and new-born child, and even as late as the fourth or fifth year of life). They are identical with the nucleated red corpuscles which are normal in the bone-marrow. In leukæmia they are more abundant than in any other condition. Exceptionally one finds in the blood large bodies into which red corpuscles have worked their way, or at any rate in which they are present.

Concerning the regeneration of the corpuscles, the details have been studied particularly in the spleen and the bone-marrow, especially in the child and the embryo. The corpuscles in the bone-marrow have feeble amœboid movements. Their protoplasm is also less granular than it is in the larger marrow-cells. They resemble, as to size, the colorless corpuscles. In a figure shown there are elements which resembles free nuclei, which are called lymphoid corpuscles, and which are found in the spleen and bone-marrow. These elements seem to be concerned in the question of the regeneration of the corpuscles. Some of them have a narrow rim of protoplasm, which is revealed by the use of proper reagents. Nucleated red corpuscles are found in the bone-marrow at all periods of life. They vary much in size and as to the condition of their nuclei. The specimens should be examined when quite fresh, and without the use of any reagents. The gradation which I have observed in the development of these bodies is as follows:

1. A solid homogeneous nucleus is observed.

2. A nucleus with a rim of homogeneous protoplasm.

3. A solid nucleus with a rim of protoplasm, but colored, and now, in fact, a completed nucleated red corpuscle.

This process of development has been studied and observed already in the guinea-pig and in the rabbit. The further change into ordinary non-nucleated corpuscles occurs gradually by the disappearance and disintegration of the nuclei. Neumann and others have also observed this series of changes. Rindfleisch has advanced a different theory in regard to the development of the corpuscles, and he believes that the nucleated corpuscle becomes non-nucleated by emigration of the nuclei. It may be considered that changes of this character are post-mortem changes, fresh marrow showing few corpuscles with nuclei at their peripheries suggesting emigration.

Neumann and Bizzozero are in accord in the belief that the nuclei disappear gradually. Bizzozero holds that the nucleated red corpuscles are developed by fission, and maintains that he has seen the process occur in the course of fifteen minutes. The opinion of Hayem, that the red corpuscles are derived from the blood-plaques, is not yet accepted by all. His arguments in support of his position are: 1. The similar disc-like and bi-concave shapes of both bodies. 2. The gradations in the size of both bodies. 3. The plaques becoming tinted gradually, absorbing or accumulating hæmoglobin. To this I may object that I have never seen the blood-plaques other than colorless, and they are also without the cup-like depressions of the microcytes, which, as already stated, I consider an intermediate form in the development of the red corpuscle.

4. The blood-plaques are seen under just the conditions which would seem to call for an increase in number—*e.g.*, after hæmorrhages and fevers.

5. In the germinative area of the mesoblast (the *parablast* of His) small plaques are seen in the so-called *blood-islands*. With certain probabilities in favor of Hayem's theories, there are gaps yet to be filled, and there are statements which have not yet been corroborated by other observers.

As a possible source of development may be mentioned the lymphoid cells, in which several corpuscles are sometimes found. These are frequently found in embryos and very young animals, and have been considered as indicating a process of degeneration. While this may be a fact, the question also arises whether it is not possible that similar phenomena will be found to indicate also a process of regeneration, the non-nucleated corpuscles arising, or appearing to arise, in the protoplasm.

Lecture III.—The Relation of the Corpuscles to the Process of Coagulation.

Buchanan was the first to assert that the colorless corpuscles played an important part in the formation of the blood-clot. His investigations were made between 1830 and 1840 upon what is termed the *washed blood-clot*, and the conclusion which he reached was that coagulation was attributable to the white corpuscles, which acted as a ferment or which contained a ferment, their action being analogous to that of rennet. His (Buchanan's) views were taken up and elaborated by Schmidt, of Dorpat, and his pupils, who consider that the white corpuscles disintegrate and thus furnish two elements, fibrinogen and fibrinoplastin, which remain in solution in the blood-plasma until conditions which favor their union arise, when they produce fibrin, which, acting after the manner of a ferment, results in the formation of a clot. This theory was elaborated largely from investigations which were made upon the blood of the horse, which abounds in white corpuscles. After the plasma had been subjected to the operation of whipping, it was found that seventy per cent. of the white corpuscles had been destroyed, or, in other words, instead of fifteen thousand white corpuscles to the cubic millimetre which existed previous to the whipping, there were not more than four thousand after the fibrin had been extracted, the rest having been destroyed, apparently, to form fibrinoplastin and fibrin ferment.

Investigations upon this subject have also been made by Woolridge. He obtained leucocytes in abundance from the lymph-glands, and, having mixed equal volumes of these bodies and a ten per cent. solution of chloride of sodium, he obtained a substance which resembled fibrin. He also injected peptone plasma into the circulation of a dog, and then with drew some of the blood, which did not coagulate, but, upon the addition of leucocytes, coagulation occurred, and the quantity of fibrin which it contained was proportional to the volume of leucocytes which was added. In other words, the weight of the fibrin was the same as that of the leucocytes. His (Woolridge's) investigations also led him to the conclusion that the leucocytes had undergone disintegration.

Concerning the experiments which have been made upon the blood of the horse, it appears that after coagulation the plasma still contains white corpuscles, or leucocytes. The theory was, therefore, advanced by Schmidt and his followers that there were two varieties of leucocytes—the α, or those which are destroyed, and the β, or those which remain and are not disintegrated.

In my opinion, no evidence of a histological character has yet been offered which proves the disintegration of the white corpuscles, as

alleged by Schmidt and Woolridge, by examination of a blood drop either upon a slide or in the moist chamber.

If the blood is examined under the microscope, the filaments of fibrin will begin to appear in a period which will vary between ten seconds and two or three minutes. Before coagulation begins, the red corpuscles and the blood-plaques are plainly seen, without any apparent change, and the white corpuscles as well, without any apparent signs of disintegration or dissolution. In fact, the amœboid movements of the white corpuscles can be made out long after the filaments of fibrin have made their appearance. Even in the blood of the horse, as studied under the microscope, in a very fine glass tube, the steps of coagulation have appeared to be the same, according to my observation, as in blood from other sources. The clot forms very gradually, and afterward the white corpuscles can be seen working or squeezing their way out of it into the serum, with no appearance of anything like disintegration. It is possible that erroneous conclusions concerning the disintegration of the leucocytes have been reached on account of mistakes in regarding the blood-plaques as disintegrated leucocytes.

Concerning the relation of the red corpuscles to coagulation, investigations have been made and their results published by Landois. He observed, in frogs and rabbits, that when their blood was drawn the red corpuscles aggregated in lumps, the hæmoglobin was lost, filaments of fibrin appeared, and the red corpuscles broke down. These observations were made ten years ago and have been confirmed, but it is still uncertain whether the red corpuscles are converted into fibrin.

The subject of the relation of the blood-plaques to coagulation is a new one. Filaments of fibrin can be readily seen projecting from the *granule-masses* of the hæmatoblasts, and Schultze and Ranvier have thought that they became centers for coagulation. The fibrin sets or forms in a thick network about the granule-masses, but it is also found, independently of the plaques, in the serum, resembling fine crystalline bodies. That the blood-plaques are centers for coagulation appears to be demonstrated by the introduction of a small piece of thread into the active circulation (*e.g.*, into the femoral vein of a dog). After it has been left there for some minutes, it is found on withdrawing it that the blood-plaques have collected upon it. Red and white corpuscles are also found upon the thread, but the plaques are much more conspicuous, and if the thread is placed in a coagulable solution, after the red and the white corpuscles have been washed away, clotting will promptly take place, and the more abundant the plaques the firmer will be the clot. The objection has been advanced that the thread has absorbed fibrin ferment, in addition to collecting the plaques, and that it is this, and not the plaques, which produces the clot in the coagulable solution. This is possible, but it has not yet been absolutely demonstrated. Eberth's investigations showed that the plaques were the first elements from the blood which settled upon the wounded portion of a vessel, and hence were the first elements in the formation of a thrombus. Eberth, Hayem, and Bizzozero have also shown that if a needle is passed over a vessel, detaining or retarding the blood-current, the blood-plaques are the first elements which collect upon the wall of the vessel, forming masses which consttute the chief element in the white thrombi. In the active circulation the plaques are seen with the red corpuscles near the center of the vessel, a few of them being at the periphery or in the *still layer* of the blood-current, with the white corpuscles. On the other hand, when the blood-current is slow the plaques are scattered irregularly among the

red and white corpuscles, both centrally and peripherally, and therefore are in a favorable situation for detention upon the wall of the vessel. It is when the current is slow that the white thrombi are formed, and I was the first to observe, in 1881, that in the most superficial part of the white thrombi the blood-plaques were present. They resembled white corpuscles and also reticulated fibrin, but were proved to be blood-plaques by the tests with osmic acid, Pacini's fluid, and salt solution. The conclusion is therefore reached that the blood-plaque exists as a separate element in the blood, and also as an important factor in the formation of a thrombus.

Correspondence.

New York, April 19, 1886.

The last regular stated meeting of the Academy of Medicine was devoted chiefly to the delivery of memorials to recently deceased members. As intimated in a former letter, the President, Dr. A. Jacobi, as a mark of the highest respect from the Academy to the late Dr. Flint, nominated himself to memorialize the late distinguished Fellow and ex-President of the Academy. It was also stated in the same communication the warm approbation of those present with which the nomination was received. Owing to a misinterpretation of some remarks that Dr. Jacobi had made at the time of Dr. Flint's tendered resignation to the Academy, Mrs. Flint sent a note of request to Dr. Jacobi that no memorial address of her late husband should be delivered before that body. The writer of this letter happened to be present the night on which the resignation was tendered. It was received with great reluctance, as was manifested by the long interval that elapsed before one of the Fellows proposed that it should be accepted. The presiding officer, Dr. Jacobi, then said that no one more than himself appreciated the labors and personal worth of Dr. Flint, and regretted that he saw fit to take such a step. For, said he, the Academy of Medicine had a great future, and to hold a position of honor in it would be as high an honor as the profession could bestow. These remarks were interpreted and even reported as saying that the Academy could get along without Dr. Flint, if he could get along without the Academy. Various considerations, but, doubtless, principally in view of the fact that the late Dr. Flint had bequeathed to the Academy the whole of his library, with the exception of such books as his family might wish to retain, induced Dr. Jacobi to carry out the original arrangement. Accordingly, before a large audience of physicians, Dr. Jacobi prefaced an eloquent and eulogistic oration by the following remarks:—"His membership in the Academy ceased a few days before the 13th of March, on which he breathed his last. You

remember the universal reluctance on the part of those present to accept his resignation, and the silence with which the remarks of the presiding officer were listened to. Malevolence only could misconstrue, and has misconstrued, into their opposite his words of appreciation and regret. His (Dr. Flint's) good-will toward the Academy is best established by his staying so long as he did under rather peculiar circumstances, and forever we shall know by the gift of his library, which he bequeathed to the Academy, that the latter was dear to his heart. For the Academy not to speak words of praise and remembrance to his memory in this hall, which he graced and in which he taught, in spite of suggestions and even demands to the contrary of a personal character, not to keep his memory green among us, is an impossibility. As it is for us, so is it for the medical men of this country. His name and reputation are part of the history of our profession, and this Academy means to honor its dead who have gone into history."

A strong reaction against the operation of öophorectomy has been making itself evident in this city of late. Quite recently a lively and sharp discussion on this subject took place at the Academy. The discussion was evoked by an able paper read by Dr. H. C. Coe, entitled "*Is Disease of the Uterine Appendages as frequent as it has been represented.*" The writer of the paper stated that he did not think that slight changes in the shape and structure of the ovary was sufficient guarantee of its removal. Slight changes in the cortex of the ovary might take place without affecting the functions of the ovary. A few small cysts, the size of peas, on the surface of the ovaries could not be considered as likely to eventuate in cystic degeneration, forming what is known as ovarian cyst. Dr. Coe thought Mr. Tait's statement too sweeping when he asserted that in chronic ovarian disease the tubes were invariably involved. The reader of the paper then asked—"What constitutes disease of the tubes"? Nothing was plainer than a plain case of pyo-salpinx, but terms had multiplied without being grounded on any pathological basis. A healthy fallopian tube was capable of increase in size. He had sought for evidence of catarrh of the tubal mucous membrane, but had not been successful, and the condition which he had found in the so-called cases of catarrhal salpingitis were such as he had been unable to distinguish from the normal. During two years Dr. Coe had examined, microscopically, every specimen which came within his reach, and these included a large proportion of the cases in which the operation had been performed in this city, and he had found that in no more than one-fifth of the cases was pyo-salpinx or hydro-salpinx present, that

hypertrophy of the muscular coat existed in a less number, and that hæmoto-salpinx had been extremely rare. The symptoms were not due to the ovaries and tubes so much as to localized peritonitis and to neuralgia pure and simple ; that he did not believe that these symptoms were removed by extirpation of the uterine appendages. It would not be proven that a cure had been effected until it could be shown that the patient was well at the end of six years after the operation. Recovery from the operation did not mean recovery from the affection for which the operation was instituted.

Dr. Lusk, the first speaker after the reader of the paper, said he was not an enemy of the operation commonly known as Tait's operation, but he had seen ovaries removed which were said to be examples of cystic degeneration, but which, in all respects, were similar to those he was in the habit of exhibiting as specimens of normal ovaries when he taught physiology. The great advance in abdominal surgery had brought evils with it. The temptation of opening the abdomen was too great, and when opened, few men had the moral courage to desist from removing the ovaries whether they were diseased or not. He thought that even in cases of pyo-salpinx other measures might be devised to effect a cure. He thought it was possible to reach these tubes by some such instrument as that devised by Dr. Mundé, and and thus be able to treat the cases successfully in that way.

Dr. W. Gil Wylie, who is well known as a bold and successful öophorectomist, said that he might have, in his lifetime, removed normal ovaries, but that he did not wish to defend the removal of such ovaries. He rarely now performed the operation, except for pyo-salpinx, and not then, unless the symptoms plainly indicated the operation and the woman wished to have it performed. When the patient was unable to perform her work, suffered from pain in the side almost constantly, or was bedridden, and there was pyo-salpinx, he believed that the removal of the uterine appendages was justifiable, and the only means of cure. Aspiration in such cases he regarded merely as temporizing. He avoided now operating in the hysterical or hystero-epileptic cases, notwithstanding that the tubes and ovaries were involved in all these cases.

Dr. Polk, who is considerable of an orator as well as a successful laparotomist, accompanied his remarks by not a little rhetorical display. He said that the disease of the tubes was not a new disease, but known under a new name. Before, it had been described in the text-books as cellulitis. These cases were successfully treated by rest in bed, poultices, and opium. The bellies of the women were not cut open, the appendages were

not removed, and the women afterward had babies. Still he believed that there was a minimum number of cases of pyo-salpinx pure and simple, in which laparotomy for the removal of the tubes and ovaries was a justifiable procedure.

Dr. Paul F. Mundé did not agree with Polk and Wylie as to the pathology of salpingitis, and did not think that disease of the uterine appendages was quite as frequent as was generally supposed. With regard to operative interference, the symptoms must be the guide, and if they were such as would not yield to other measures, and the woman wished to have it performed, he regarded laparotomy for the removal of the uterine appendages as a justifiable operation.

Dr. E. Noeggerath, the veteran gynæcologist of this city and the Ricord of pelvic pathology, was the last speaker. The old doctor does not enjoy good health, and is seldom seen at society meetings. His remarks, which were delivered with a decided foreign accent, were listened to with great attention. He said that he still adhered to the views which he expressed eleven years ago, that the large majority of peri-uterine affections are of peritonitic origin, but that cases of cellulitis and parametritis occurred from other causes. He did not think that endometritis was more frequent than peritonitis and salpingitis. He had become convined that it was possible to relieve, by careful and rational treatment, a great many who were operated upon for removal of the uterine appendages. However, he had seen several specimens which had been removed by Dr. Wylie, and in every case the specimen showed that the operation was justifiable.

The honor of delivering the Cartwright lectures this year was extended to Dr. William Osler. The course consisted of three lectures, and the subject chosen was "Certain Problems in the Physiology of the Blood." In spite of very bad weather, the lectures were extremely well attended, and the audience included most of the leading members of the profession in the city. The lecturer was particularly at home in the subject he had chosen, and it was a surprise to many present to notice how little he referred to his manuscript. Dr. Osler seems already to be admired and respected by the American medical profession to the same extent as he is by his confrères in his native land. Canada may well feel proud of her son, and McGill University in particular—of the student that sat upon her benches and the professor that lectured within the walls of her college.

Another munificent gift has been made by the Vanderbilt family to the College of Physicians and Surgeons. The four sons of Vanderbilt—Cornelius, William K., Frederick W. and

George W.—have each contributed the sum of $62,500, making a total of $250,000, with which they propose the erection of a building on the grounds on the corner of Sixtieth street and Tenth avenue—given to the college by the father—to be known as the "Vanderbilt Clinic" of the College of Physicians and Surgeons. The building, which the sons intend to be a memorial to their father, will be used for the purpose of clinical teaching exclusively. The building will be 75 feet by 100, and the style of architecture will conform with that of the new college and the new Sloan Maternity Buildings, all of which will be on the ground presented by Mr. Wm. H. Vanderbilt to the College. The corner-stone of this building will be laid on Saturday, the 24th inst., at 3 p.m., by Mr. George W. Vanderbilt, and an address delivered by Mr. Chauncey M. Depew.

A death from chloroform inhalation has recently occurred in a renowned private surgical hospital in this city. A patient was admitted with a gluteal abscess, and the surgeon requested his assistant to administer chloroform prior to the operation of opening the abscess. The patient struggled a great deal, and forcibly grasped the administrator. To release himself from the vice-like grip the assistant had to call the nurse. Almost immediately after this struggle was over the patient ceased to breathe. The surgeon just came into the operating-room then, and in spite of everything that could be done, the patient could not be resuscitated. A coroner's inquest was held, and a jury empanelled consisting of twelve of the leading surgeons of this city. The jury naturally exonerated the surgeon and his assistant from all blame, though there is a strong feeling among the profession here against the use of chloroform for anæsthesia.

Reviews and Notices of Books.

The Principles and Practice of Surgery.—By John Ashurst, Jr., M.D., Professor of Clinical Surgery in the University of Pennsylvania, Senior Surgeon to the Children's Hospital, &c. Fourth edition, enlarged and thoroughly revised, with 497 illustrations. Philadelphia: Lea Brothers & Co. 1885.

Professor Ashurst must be an indefatigable worker. While superintending the issuance of those ponderous volumes comprising the Encyclopædia of Surgery, and at the same time contributing not a little to their subject matter, he finds time to bring

out a fourth edition of his original work on the Principles and Practice of Surgery. What would we not give for the secret whereby some men overtake an amount of mental labor which, under ordinary circumstances, it takes three to accomplish ?

The edition before us has been carefully revised and so much new material introduced as to require the addition of more than fifty pages. In looking over the book, we notice, with some feeling of regret, that the author disposes of the important subject of wound-dressing in a single page. He is evidently very conservative in this regard, having seen no reason to adopt Lister's method or any of its modifications. We fear they have not had a fair trial, or we venture to think the verdict would have been very different. In the hands of such an able surgeon as Prof. Ashurst, the "modern antiseptic methods" would be certain to bring glorious results. Otherwise, there is nothing in the book requiring special notice. The articles which appear for the first time have reference chiefly to the surgery of the stomach, intestines, kidney and spleen. Many of the illustrations are original and unique. The arrangement of the matter is good and the printing excellent. We have no doubt the work will continue to be highly appreciated, especially by American practitioners. As a text-book it has much to commend it.

A Manual of Operative Surgery.—By Lewis A. Stimson, B.A., M.D., Surgeon to the Presbyterian and Bellevue Hospitals, Professor of Clinical Surgery, University of New York, &c. Second edition, With 342 illustrations. Philadelphia: Lea Brothers & Co. 1885.

This manual is, indeed, a *multum in parvo* of operative surgery. For comprehensiveness, we have seldom seen it excelled. Almost every known operation is described at sufficient length to make it well understood. Much space is given to plastic surgery and congenital deformities, while the everyday surgery of the eye and genito-urinary apparatus receives a fair modicum of attention. Even that mysterious subject, modern gynæcology, has not been entirely overlooked by our author, although, like all general surgeons, he has much to learn in this department. For instance, he does not even mention that fascinating opera-

tion, Alexander's, whereby the slack of the round ligaments is hauled in and braced up in true nautical fashion, nor the "one-stitch" perineorraphy" of Alloway, which all gynæcologically-bred women yearn after next to their first-born. We earnestly venture to hope that the last operation at any rate, which is rapidly becoming fashionable, will be fully described, with plates furnished by the originator himself, in the next edition of this work. We are pleased to notice that so much space has been devoted to a description of that operation to which gynæcologists have given the unpronounecable name of kolpokleisis. This being interpreted, simply means closure of the vagina, and for obvious reasons is barely mentioned in text-books on diseases of women. No well-trained gynæcologist naturally likes to close up a good paying business in that abrupt fashion. Of course he has another and much more potent reason for not advocating kolpokleisis, and herein we admire his philanthropy, namely, that the operation is almost certain to cause connubial embarrassment of the most serious kind. In our humble opinion, and we base it on the above premises, this operation should never be performed in females under seventy years of age.

In fine, we congratulate Dr. Stimson on the admirable work on operative surgery which he has given to the profession, and will have much pleasure in recommending it to those whose choice of surgical literature it is our privilege constantly to influence.

Practical Surgery: Including Surgical Dressings, Bandaging, Fractures, Dislocations, Ligature of Arteries, Amputations, and Excisions of Bones and Joints.—By J. Ewing Mears, M.D., Lecturer on Practical Surgery, and Demonstrator of Surgery in Jefferson Medical College, &c. With 490 illustrations. Philadelphia: P. Blackiston, Son & Co.

This edition of Dr. Mears' work is far in advance of that published in 1878. We notice that the author has dedicated it, *in memoriam*, to the late Dr. S. D. Gross—a fitting tribute to the memory of his old and esteemed teacher.

This edition is a vast improvement on the last in comprehensiveness, arrangement of contents, and general get-up. In other words, it is very complete as far as it goes, but still, in our

opinion, it stops short of what it should be to deserve the title of a Practical Surgery. Doubtless it will answer the purpose of students of medicine, who naturally prefer a concise description of amputations, excisions, and the ligature of vessels, but to the general practitioner, whose everyday surgery is of the minor type, the book will be almost useless. We would venture a hint to the author that in his next edition he should add a chapter describing the operations for talipes, nævus, harelip, fistula of various kinds, hemorrhoids, removal of breast, castration, etc., a knowledge of such being always required by student no less than practitioner, and which would add materially to the value of the book.

As we before intimated, however, as far as it goes it is very complete, and we have much pleasure in recommending it especially to the student.

Coca, Cocaine, and its Salts. Their History, Medical and Economic Uses, and Medicinal Preparations.—By W. MARTINDALE, F.C.S., joint author of the "Extra Pharmacopœia." London: H. K. Lewis. 1886.

The greater part of this little work is devoted to a description of what old travellers have said about the properties of coca. The manner of cultivating the plant is fully described. Practical hints are given on choosing the leaves. There is a fairly full description of the more important uses of the drug, but, with the exception of a short account of the local action, the pharmacology is almost entirely ignored. With this exception, the work tells us all that is known about this drug and its alkaloid.

Local Anæsthesia in General Medicine and Surgery. By J. LEONARD CORNING, M.D. New York: D. Appleton & Co. 1886.

The above work is divided into two parts. The first being taken up with a description of the oft-repeated story of anæsthesia, does not add to the value of the work. The second part is an account of how best to prolong the local anæsthetization induced by cocaine. This, the author claims, can be best effected by the application of Esmarch's bandage to the limb previous to

injecting the cocaine hypodermically. For the details of the author's process we must refer our readers to the work itself, but, at the same time, we must say that it is a pity that he should have considered it necessary to write a work of one hundred pages on a subject that could be readily told in one short journal article.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, March 5th, 1886.

T. G. Roddick, M.D., President, in the Chair.

Unusual Ovarian Tumor.—Dr. Wm. Gardner exhibited an ovarian tumor, and briefly narrated the case. The woman, aged 48, long married, sterile, consulted him six years previous for a moderately large cystic tumor, with solid nodules in the pelvis. Menstruation was increased. She was advised against operation, but saw another surgeon, who explored through abdominal incision, but apparently did not otherwise interfere, as she appeared sometime afterwards unchanged in her condition, except for the scar, with a ventral hernia. Dr. Gardner then lost sight of her till two months ago, when she was admitted to the Montreal General Hospital and he was asked to take charge of her. She then related that a few months after the exploration she began to enlarge rapidly, and pressure symptoms became so distressing as to induce another surgeon to tap. This was necessary many times, but four months previous to admission the tumor ceased to enlarge. The lower part of the abdominal walls and lower limbs were œdematous. The whole abdomen, except the upper part, was elastic, indistinctly fluctuating, and dull on percussion. The hypochondriac and epigastric regions were tympanitic, but gave distinct wave-fluctuation. Menstruation had ceased eight months previous. Patient was eager for operation, although made fully to realize its serious character, and it was decided to give her the chance, though small. There was universal very firm adhesions to parietes, intestines, bladder and everything in the pelvis. The bladder was adherent and drawn up at least six inches over the tumor. It was separated without difficulty. Intestine was wounded twice during the operation, but promptly sutured. Above the tumor was an encysted collection of peritoneal fluid, with the intestine floating on it. Under this lay a large, very thin, translucent cyst attached to the tumor. Hemorrhage, although not excessive, was free enough, when aided by the long severe operation,

to so exhaust that it soon became apparent that the patient's chances were almost nil. The base of the tumor contained the uterus and a large mass of calcareous matter and myomatous nodules. It was included in a Tait's wire clamp, constricted, and then amputated. Bleeding being nearly arrested, the abdomen was closed, with a drainage-tube inserted. The woman died half an hour after being put to bed. The tumor was a multilocular cystoma, the large cysts containing large masses of papilloma, nodules of which were also found on the parietes of the abdomen. The mass of calcareous matter measured $3\frac{1}{2} \times 2 \times 1$ inches.

Small fragments of transparent rock-crystal removed from the Cornea.—Dr. Buller exhibited the crystals and related the case. They consisted of three small fragments of rock-crystal. The largest of the three is of a triangular or conical shape, about $1\frac{1}{2}$ millimetres in length ; the others are of smaller size. He removed them from the cornea of a marble worker, where they had been lodged for several days. They had been projected into the eye from the chisel of another workman as the young man who received the injury was passing by. He came to him about an hour later, and he found two small incised wonnds of the cornea lying parallel to each other, about one millimetre apart, and nearly opposite the lower margin of the pupil. After a careful scrutiny with focal illumination, he failed to find any foreign body, but prescribed a solution of atropine and cold water compresses. The patient returned for inspection from day to day, but despite the treatment the eye became more and more inflamed. The other one he had lost by a penetrating wound of the eyeball some months previously, so that he was led to explore the little wounds with a fine cataract needle. By this means the steel point coming in contact with the gritty particles instantly gave unmistakeable evidence of their presence, though wholly invisible to ocular inspection. On moving one of the particles some aqueous humor escaped, showing conclusively that it had penetrated partly into the anterior chamber, and from being invisible, would be extremely liable to be pushed into the anterior chamber during any attempt at extraction. The eye was then put under the influence of cocaine, and the blade of a broad needle was passed through the cornea (of course penetrating the anterior chamber) in such a way that the part containing the foreign bodies rested upon the flat surface of the transferring blade. It was an easy matter then to remove the particles with a fine cutting needle, and without the slightest chance of their being pushed into the anterior chamber, a mishap which would have led to disastrous consequences if it had

been permitted to occur. The eye, once freed from the source of irritation, made a rapid and satisfactory recovery.

Dr. Johnston exhibited the following specimens :—

Sacculated Kidney from Renal Calculus, removed from a patient who died of heart disease, with thrombosis of right middle cerebral artery. Symptoms of blood and pus in urine observed before death. Right kidney enlarged to double usual size, distended by fluid, renal tissue destroyed, and organ converted into series of cysts containing fœtid ammoniacal fluid, tissue debris and uric acid granules At inferior, extremely small parts of renal substance remaining ; in calices, several small uric acid calculi. This portion of kidney alone communicated with ureter.

Gunshot Wound of Brain.—Patient, aged 43, admitted to General Hospital under Dr. Fenwick, committed suicide by shooting himself with a revolver (No. 32). External wound in right temporal region 1½ inches above zygoma, and half an inch behind external angle of orbit. Temporal bone shewed small round perforation, lying just within which was a small spiculi of lead and a small blood-clot. Course of bullet lay through dura mater, entering cerebrum at posterior extremity of the third right frontal convolution, thence through right hemisphere, falx cerebri and left frontal lobe to posterior part of first left frontal convolution, where dura mater was again wounded and inner surface of skull slightly indented. From this point a furrow extending downwards and backwards through the cortex cerebri, the bullet being found lying in postero-inferior aspect of left ascending frontal convolution, within a small spot of softening. The track of the bullet was marked everywhere by extensive hemorrhagic softening ; the bullet itself was cylindrical, having one side flattened. There was extensive meningeal hemorrhage in longitudinal fissure, and a little at the base. Ganglia and ventricles uninjured. Acute double tuberculaa pleurisy also present, with an old caseous nodule at right apex. Patient had lived eight days after the injury, apparently conscious, and understood questions till two days before death, but never spoke. Slow flexion and extension of right arm constantly noticed ; left leg often crossed to right side and raised. No tremors, spasm or obvious paralysis.

Fatty Degeneration of Heart—Aneurysm of left ventricle perforating into Pericardium—Aneurysm of Abdominal Aorta. —Patient was 75 years old. At autopsy, pericardium contained eight ounces of fluid. A small amount of firm clot adherent to anterior surface of heart on dissection. Valves healthy ; substance showed extensive fatty degeneration. In left ventricle,

a pouched sac size of walnut found in wall of septum, bulging towards left ventricle. This communicated directly through a small opening 2 mm. in diameter, with lacerated external opening of large size in septum, the orifice situated to right side of anterior coronary artery. Sinus about orifice infiltrated with extravasated blood ; and in same patient, extensive atheroma of aorta, and in abdominal aorta, just above bifurcation, a fusiform sacculated aneurysm rising from right side of vessel ; extensive fatty change of intima at this point, with formation of cholesterine. The sac contains a soft dark-clot, non-adherent.

Dr. Geo. Ross said this patient had been suffering from cellulitis of the arm, and alarming symptoms coming on, he was asked to see her. She had become suddenly pallid. On examination, he found her almost pulseless and extremely feeble. A systolic murmur was to be heard over the lower sternal region, also over the tricuspid area. The murmur could be heard over the apex, but not at the base. The house physician said she had had no murmurs before. Dr. Ross said that it was remarkable the time she lived after the grave symptoms set in—from 2 a.m. till 9 p.m. It was no doubt due to the small amount being poured into the pericardium. He believed the bruit to be caused by the current in the aneurismal sac containing clot.

Dr. Wilkins said it might be due to the blood poured out with each systole through the rent.

Dr. Rowell exhibited the *Lumbar Vertebræ* of a patient, the immediate cause of whose death was *Miliary Tuberculosis*.—The following is the history of the case : Mrs. A., aged 46, married, admitted to the Western Hospital under the care of Dr. Armstrong, complaining of intense pelvic and lumbar pain. The patient was comparatively easy if quiet, but the pain was much exaggerated on walking. On examination, found fixation of the lumbar vertebræ, which would remain curved strongly forwards (lardosis) in any position in which she was placed. A plaster-of-paris jacket was applied, which gave her perfect relief for some weeks, when she began to complain of chilly sensations, accompanied by a high temperature, going up to 104° and 105°, without, however, any distinct rigors or profuse sweating. Moist sounds were heard over both lungs, back and front. She now became hectic, suffering from anorexia, with rapid emaciation, and finally died about three months after admission into hospital. At the post-mortem, found both lungs completely filled with miliary tubercles throughout their entire extent. The spleen and kidneys also contained a large number of miliary tubercles, especially the spleen, which was completely studded with them. The heart

and liver were fatty. The 2nd, 3rd and 4th lumbar vertebræ were removed, and found softened by an inflammatory process in their cancellous tissue, where there were small pus cavities. The cancellous tissue of the 3rd lumbar vertebra was broken down to a considerable extent, and there was pus found between the dnra mater of the cord and the bone in the spinal canal of that vertebra. It was noted that the intervertebral substances were healthy, the disease being confined to the cancellous tissue of the bodies of the vertebræ.

Drs. Perrigo and Trenholme, under whose care this patient had been at different times, also made some remarks.

Dr. Rowell also showed—

Ovarian Tumors from a case of Double Ovariotomy.—Mrs. G., aged 27 ; family history negative ; married three years ago, never pregnant. For the last two and a half years has suffered a great deal from abdominal pain, not particularly exaggerated at the menstrual periods, which occurred regularly once in 24 days. She was not herself aware that she had any localized enlargements. The operation was performed in the month of February last by Dr. Armstrong, in the Western Hospital. The cyst on the right side was found to be unilocular, about the size of a fœtal head, and containing serum. Its walls were strongly adherent to the brim of the true pelvis by their under and posterior surfaces, which made its removal very difficult, and it was followed by a considerable oozing of blood, which, however, was controlled by hot sponges. The cyst on the left side was about the same size, also unilocular, and contained serum. It was slightly adherent to the omentum, but was removed with much less difficulty than its fellow. The patient recovered without a bad symptom.

CHATHAM MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, April 2nd, 1886.

The President, Dr. Bray, in the Chair.

Adenoma of the Breast.—Dr. Rutherford exhibited this specimen and Dr. Backus a microscopical section of the same. The patient, aged 52, fell six months previously and injured her left breast. It was sore for some weeks after the accident, which, however, entirely disappeared. Three months after the injury a hard nodule was felt, and grew rapidly, causing great anxiety on the part of the patient. Dr. R. advised its removal, which was consented to. The tumor, with adjacent skin, nipple and a portion of the gland were removed. The A.C.E. mixture

was the anæsthetic used, and proved satisfactory. The wound united perfectly in ten days, dry dressing being used.

Dr. Holmes quite concurred in the wisdom of the operation, but suggested that it would have been judicious to have removed the whole gland, taking into consideration the age of the patient and the uncertainty of the diagnosis before operating.

The President agreed with the remarks made by Dr. Holmes.

Extraction of the after-coming head, with history of a case.—Dr. McKeough reported a case of midwifery, with special reference to the delivery of the after-coming head. Mrs. B , æt. 42, was married when quite young and had two children, both labors being normal and not difficult. Shortly after the birth of her second child she became a widow, and remained so until she was 38 years old, when she again married. A year subsequently she gave birth to a child, which was delivered instrumentally by Dr. Holmes, great difficulty being experienced in bringing the head through the brim of the pelvis. Dr. Holmes thought the cause of the obstruction was either a small exostosis or enchondroma growing from the promitory of the sacrum. Two years later she was taken in labor for the fourth time. When Dr. McKeough was called she had been in labor about eighteen or twenty hours. The vagina was hot and dry, the amniotic fluid having escaped several hours previously. Pulse quick and rapid. The os was fully dilated, but the head had not entered the brim, which seemed narrowed in its antero-posterior diameter. The forceps were at once applied, but all attempts at extraction were ineffectual. Assistance was obtained. Ether was administered and the child turned. The body of the child was delivered with some difficulty, but the head could not be extracted by the ordinary methods of expression and traction. The woman's condition being critical, it was resolved to perforate at once, which being accomplished, delivery was soon completed. Apart from the cause of the obstruction, which was apparently progressive in its nature, the interest of the case lay in the extraction of the after-coming head. Referring to the literature of the subject, some diversity of opinion exists. In ordinary cases delivery can be accomplished by manipulation, which undoubtedly is the preferable mode. When this cannot be accomplished, the question arises whether perforation or the forceps are indicated. Koppe and Schröder regard it as a useless procedure to apply the forceps to an after-coming head, and maintain that perforation is the best and safest measure to adopt; whilst Credé (quoted in *American Lancet*, March 1866) and Lomer (quoted in *Amer. Jour. Med. Sciences*, April 1886) assert that in certain cases

this application of the forceps is a useful and successful procedure, and may be the means of saving the life of the child, both authorities reporting cases to that effect. Koppe describes a manual method which may be of service in some cases, namely, empty the bladder, bring the antero-posterior diameter of the head into the transverse diameter of the pelvis, place the hand just above the symphisis, and firmly press the head of the child against the last lumbar vertebra. The bones of the head glide over one another, diminishing the bi-parietal diameter. As soon as the head is felt to glide into the pelvis, traction is used, and delivery completed.—(*Amer. Jour. Med. Sc.*, April 1886.)

Amputation of the Thigh.—The PRESIDENT read the history of a case of amputation of the thigh. When called to the patient he found an oblique fracture of the femur, about two inches above the knee, the result of an accident which had occurred nineteen days previous. There was no union, and the leg, as far as the knee, was gangrenous; the gangrene having commenced at the knee and progressed downwards. The man was also suffering from blood-poisoning. Temperature 104¾°; pulse 140, and general condition very grave. He advised amputation, but endeavored to improve his general state. Tr. Ferri Mur. 30 m. and Quinine Sulph. grs. iii every three hours were ordered, together with beef tea, oysters, milk and brandy. Two days later the condition of the man had so much improved that he resolved to operate at once; his temperature being at the time of the operation 101½°, and his pulse 90. The circular operation was performed, the leg being removed about the middle of the thigh, four inches above the fracture, and at that distance the muscles as well as the integument showed signs of bruising. Gangrene attacked the flaps the day after the operation, and they sloughed away to the extent of three inches or more, probably due to the bruised condition of the parts. Granulations, however, were rapidly covering the exposed bone and the general condition of the man at present, four weeks after the operation, was most favorable, and there was every prospect of a good stump.

Multiple Neuritis.—DR. HOLMES read the history of the following case: Miss E. W, aged 36, has a good family history. Always well until 4½ years ago, when inability to recognize sensations of heat and cold affected the outer side of the left foot and rapidly extended to the entire limb, which was also affected with slight intermittent muscular twitchings. These symptoms have undergone but little change since. Three years ago she

had an attack of inflammatory rheumatism, from which she had a slow convalescence, but gradually regained her former health, until about two years ago, when she was seized with great sacral pain, which continued for several months, but finally disappeared. A year ago the right arm and shoulder lost the power of distinguishing between heat and cold, but gave little inconvenience for three months, when distressing burning and stinging sensations were felt in the arm, shoulder and adjacent thoracic region. There was but little change in these symptoms when she consulted Dr. Holmes. The arm is easily fatigued and quite useless. The hand is glossy and puffy, and shows spots of slight purplish discolorations. Feels pricking and pinching equally well in each arm and hand. Her general health is good. Uterine functions normal. She is not nervous or hysterical, and looks well. She had had electricity, both faradic and constant currents, applied for a length of time, and had taken the iodides in large doses for a long period, with much benefit to her general health, but without much improvement to the local symptoms. Thinking this to be a case of multiple neuritis, in which the lesion continued after the original cause had been removed, and that the existing state was one of chronic passive congestion of interstitial nerve elements, with probably pressure from inflammatory effusion, Dr. Holmes resolved to try the Paquelin thermo-cautery. This was applied pretty extensively to the hand, arm, shoulder and thoracic region, and also along the right side of the spine, in the inter-scapular region, to the extent of producing slight vesication. In all, there were sixteen applications during the course of two months treatment. There was constant radical improvement from the commencement of the treatment, and at its cessation she could use her arm in household duties quite well, and the burning and stinging had about disappeared.

—Hopeine is a substance which is claimed to be the alkaloid of hops. The *Pharmaceutical Journal* of London says the alkaloid is now being tested.

—Dr. Bochefontaine, Chief of the Laboratory of the Faculty of Medicine of Paris, died recently. He was an active opponent of the microbic theories of Pasteur and Koch, and swallowed a dose of cholera bacilli during the epidemic last year in order to prove their innocuousness.

CANADA

Medical and Surgical Journal.

MONTREAL, MAY, 1886.

NEW THEORIES OF FAT ABSORPTION.

Till recently, while it was well known that most of the fat entered the blood by the lacteals and not through the portal system, it was nevertheless a matter of dispute as to how the fat reached the central lacteal of the intestinal villus. There were two views maintained: the one that the minute fatty particles passed between the epithelial cells covering the villus; the other, that they passed directly through the cells themselves, some even believing that the striated border of these cells owed its peculiar appearance to the presence of pores through which the molecular fat passed.

This subject of fat absorption has for some time received very careful investigation at the hands of an unusually cautious observer, Professor Schäfer of University College, London. His observations were made on frogs and various mammals during the process of actual fat absorption. His procedure was briefly as follows: After a meal rich in fat, portions of the mucous membrane of the intestine were snipped off and either hardened in osmic acid or at once teased up in serum or aqueous humor. Portions of the osmic preparations were stained and cut into sections. As is well known, osmic acid colors fat dark. Professor Schäfer feels justified in now drawing the following conclusions, which are deserving of the greater confidence, as they have had independent confirmation by another observer, Prof. Zawarykin:

1. There are no pores in the striated border of the columnar epithelium covering the basement membrane of the villus.

2. There are no protoplasmic processes extending from these cells into the corium of the villus, and there are no such processes between the epithelial cells.

3. The main tissue of the villus is more of the nature of areolar than of adenoid tissue, with flattened and branched cells, connective tissue fibres in variable amount, according to the kind of animal and the part of the intestine under examination, a large proportion of soft ground-substance, and a considerable, but variable, number of cells which are quite like the white corpuscles of the blood.

4. The protoplasm of the covering epithelium of the villi is very soft and easily indented.

5. The amæboid corpuscles are most abundant in the villus during fat absorption. They may be derived from three sources: the blood-vessels, the covering epithelium of the villi, and from self-division. The latter is by far the most abundant and best established mode of origin.

6. The amæboid corpuscles may pass *between* the epithelium almost, if not quite, out to the intestinal contents, or they may pass *into* the epithelium.

7. In any case they take up a load of fat, return with it within the tissue of the villus, enter the central lacteal, and break up in the lymph within it.

These amæboid cells have been, by reagents, actually fixed in the act of passing through the central lacteal.

8. Though this is the chief mode of fat absorption, it is not the only one.

9. Fat is found abundantly in the epithelium, and though the striated border is probably specially suited for its absorption, Schäfer has never seen it actually passing through.

It is certain that fat can be further comminuted in these cells, and they can probably also exert some chemical influence over the constituents absorbed.

It is possible that they can construct fats from their constituents, glycerine and fatty acids, into which they had been resolved in the intestine.

10. Absorption is also effected to a considerable extent by the

tissues of the mucous membrane other than those referred to above ; but it is not a process of simple filtration or osmosis, for when the cells are removed there may be a flow in the opposite direction—*i e.*, towards the intestinal contents (Hoppe-Seyler).

11. It is highly probable that the amæboid cells are actively concerned in promoting the absorption of alimentary substances of all kinds, and they also may have a chemical action on the same.

Metschnikoff has shown that the tail of the batrachiam larva is absorbed by these amæboid cells. The investigations of many observers shows that among invertebrates, especially the cœlenterates, there is intra-cellular absorption and digestion of food ; in fact, with many it must almost necessarily be the only method. It is likely that these amæboid cells play a very important part in the resorption of pathological products.

While Schäfer's investigations have placed the whole matter of fat absorption on a better basis, his work is chiefly valuable and original in that it shows clearly, for the first time, the great part played in the process by the amæboid cells.

Taken in connection with Landwehr's discovery of the fat-digesting powers of the bile, referred to in a former number of this JOURNAL, it is clear that a great advance has been made in our knowledge of the whole matter of the introduction of fat into the economy.

CONDITIONS ALLIED TO RENAL CIRRHOSIS.

This subject, which has lain fallow for some time past, has been recently re-opened by Dr. A. L. Loomis. While Dr. Loomis has neither introduced any new facts, nor any novel interpretation of the old ones, still, the opinion held by so eminent a physician is worthy of close attention. In his paper upon arterio-capillary fibrosis, he states that his own observations convince him of the correctness of Gull and Sutton's views, that this lesion may occur throughout the system independent of any cirrhotic change in the kidneys, and believes that the old theory that such change is induced through spasm of the arterioles in consequence of the circulation of impure blood. He emphatically characterizes

renal cirrhosis as being primarily a blood disease, and not a local affection of the kidneys.

Apropos of this, Sir Wm. Gull has just published (*American Jour. Med. Sciences*, April '86) a restatement of his views upon this subject. He regards cirrhotic changes, whether in the kidneys or elsewhere, as of a degenerative nature, and not inflammatory in character; and while assured that fibrosis of the systemic arterioles can induce renal cirrhosis, he is sceptical as to whether primary renal cirrhosis causes fibroid change throughout the system. He lays stress on the value of persistent excess of arterial tension as being the dominant symptom in either case, and considers it of more uniform occurrence and clearer significance than even albuminuria.

These views, while being, as far as they go, interesting and plausible enough in themselves, do not appear to satisfactorily cover the whole ground, and when we consider that lately Prof. Bouchard, in a lecture on *Uræmia*, pronounces in favor of ptomaines and biliary products constituting the real *nova*, one is inclined to wonder "what's in a name"? and to feel dimly conscious that the theory of Bright's diseasse is becoming uncomfortably vague and promiscuous.

LYMPHODERMIA PERNICIOSA.

Under the name *lymphodermia perniciosa*, Kaposi describes a new form of skin disease. The only example with which he has met occurred in a woman 40 years old. The disease at first bore a close resemblance to a chronic universal eczema, but it soon afterwards presented characters entirely distinctive. In addition to great doughy swelling of the whole skin, there was marked thickening of the integument in irregular patches, and also hard nodules, ranging from the size of a pea to a pigeon's egg, were found scattered throughout the subcutaneous cellular tissue, especially that of the forearms, mammæ and abdomen. Some of these nodules spontaneously discharged a small quantity of yellow, creamy fluid. The condition of the patient remained unchanged for several months. Finally she became very anæmic. The red cells were much diminished in number, while

there was an absolute increase in the number of the white—3,800,000 red to 125,000 white. The spleen became much enlarged, also did the lymphatic glands. On microscopic examination, the subcutaneous nodules were found to be made up of a fine stroma, in the meshes of which were found lymphoid cells. After death, changes were found in the spleen, lymphatic glands and bone marrow closely corresponding to those seen in ordinary cases of leukæmia. Numerous nodules were also found in the lungs having the same structure as those in the skin. This is the first recorded example of a true leukæmia of the skin.

CANADIAN MEDICAL ASSOCIATION.

The nineteenth annual meeting of the Canadian Medical Association will be held in the city of Quebec on Wednesday and Thursday, the 18th and 19th of August next. There are good prospects of a more than usual successful gathering. A number of the prominent physicians and surgeons of the leading medical centres of the United States will be present.

McGILL UNIVERSITY.

Convocation Day of the Faculty of Medicine.

The annual convocation of McGill University for conferring the degrees in medicine was held on the 29th of March, in the William Molson Hall. There was a very large attendance of professors, students and ladies.

At three o'clock the Hon. Chancellor Ferrier took the chair. There were present on the platform: Sir Wm. Dawson, Principal; Rev. Canon Norman, M.A., D.C.L.; J. R. Dougall, M.A.; R. P. Howard, M.D., Dean of the Faculty of Medicine; A. A. Browne, M.D.; Wm. Gardner, M.D.; Rev. Geo. Cornish, M.A., LL D.; Prof. Penhallow, B.Sc.; R. A. Ramsay, M.A., B.C.L.; W. C. McDonald; Rev. Dr. Wilkes, LL.D.; J. Stewart, M.D.; Hon. Judges Mackay and Torrance; C. E. Moyse, B.A.; Rev. Principal MacVicar; W. C. Baynes, B.A., secretary; J. W. Brakenridge, B.C.L.; Hon. J. S. C. Wurtele, D.C.L.; G. P. Girdwood, M.D.; H. T. Bovey, M.A., C.E.; R. L. MacDonnell,

M.D.; Rev. D. Coussirat, B.A.; Alex. Proudfoot, M.D.; John S. Hall, B.A., B.C.L.; D. L. Robertson, M.D.; Rev. Professor Scrimger, M A.; T. Wesley Mills, M.D.: Geo. Ross, M.D.; J. Ralfe Murray, B.A.; Jeffrey H. Burland, B.A.Sc.; J. H. Fulton, M.D.; M. W. Taylor, librarian; Geo. Wilkins, M.D.; C. H. McLeod, M.A.; Prof. Margrave; Alex. Johnson, M.A., LL.D.; Dr. Fenwick, Dr. R. J. B. Howard, Dr. Shepherd, Dr. Ruttan, and Rev. W. J. Dey.

The total number of students enregistered in this Faculty during the past year was 237, of whom there were from Ontario, 113; Quebec, 64; Nova Scotia, 19; New Brunswick, 18; United States, 9; Prince Edward Island, 6; Newfoundland, 2; British Columbia, 1; Manitoba, 1; England, 1; Asia Minor, 1; West Indies, 1; and South America, 1.

The following gentlemen, 53 in number, have passed their Primary Examination on the following subjects: Anatomy, Practical Anatomy, Chemistry, Practical Chemistry, Physiology, Histology and Botany :—

Boyd, J., Vankleek Hill, O.
Berry, R. P., Lindsay, O.
Bradley, W. I., B.A., Ottawa, O.
Cameron, K., Montreal.
Christie, W., B.A., Lachute, Q.
Clouston, J. R., Leeds, Q.
Conroy, C. P., Martintown, Q.
Desmond, F. J., Newcastle, N.B.
Donald, W. M., Seaforth, O.
Easton, C. L., Easton's Corners, O.
Edgar, C. J., Napierville, O.
Fritz, H. D., B.A., St. John, N.B.
Gunne, N. D., Ailsa Craig, O.
Graham, J., Carp, O.
Hall, A. G., Franklin Centre, Q.
Hewitt, J., Quebec, Q.
Hoare, C. W., Strathroy, O.
Hopkins, H. J., Cookshire, O.
Hubbard, O. H., Gilsam, N.H.
Kennedy, J. H., Lindsay, O.
Kenney, F. L., B.A., St. John, N.B.
Kincaid, R. M., Clarenceville, O.
Kirkpatrick, E. A., Kentville, N.S.
Long, C. H, Keswick Bridge, N.S.
McKinnon, H., Alexandria, O.
McDonnell, AE. J., B.A., Morrisb'g.
McCarthy, J. G., Sorel, Q.
McDonald, Geo., Renfrew, O.
McDonald, A. D., Wickham, N.B.
McKay, H. H., Plainfield, N.S.
McFarlane, M., Arnprior, O.
McLennan, D., Dunvegan, O.
McMartin, D. R., Martintown, O.
McDougall, D. S., Russell, O.
Morrow, C., Russell, O.
Murray, D., Plainfield, N.S.
Orr, A. E., Cookshire, Q.
Orr, J. E., Mount Elgin, O.
Orton, T. H., Hamilton, O.
Park, P. C., Durham, O.
Potts, J. M., Belleville, O.
Pothier, J. C., Woonsocket, R.I.
Pearman, H. V., Halifax, N.S.
Robertson, A. G., Iroquois, O.
Schmidt, A. F., Montreal.
Stewart, A. D., Arundel, Q.
Springle, J. A., Montreal.
Thomas, W. R., Elkhart, Man.
Thompson, J. H., Gananoque, O.
Weagant, R. A., Hoasic, O.
Wetmore, F. H., Bloomfield, N.B.
Wilkins, H. P., Toronto.
Wylde, C. F., Halifax, N.S.

The following gentlemen, 46 in number, have fulfilled all the

requirements to entitle them to the degree of M.D., C.M. from the University. In addition to the primary subjects mentioned, they have passed a satisfactory examination, both written and oral, on the following subjects: Principles and Practice of Surgery, Tneory and Practice of Medicine, Obstetrics and Diseases of Women and Children, Medical Jurisprudence, Pathology and Hygiene, and also Clinical Examinations in Medicine und Surgery conducted at the bedside in the Hospital :—

Armitage, J. H., Newmarket, O.
Aylen, P., Aylmer, Q.
Birkett, H. S., Hamilton, O.
Boggs, C. W., Wolfville, N.S.
Campbell, A. W., Montreal.
Cattanach, W. S., Glenwater, O.
Clarke, J. L., Waterloo, Q.
Craig, M. A., Glenwater, O.
Crockett. W. C., B.A., Fredericton,
Decow, D. McG., Iona, O. [N.B.
Gardner, T. M., Bayfield, O.
Gibson, J. B., Cowansville, Q.
Gladman, G. J., Lindsay, O.
Graham, J., Carp, O.
Grant, J. H. Y., Ottawa, O.
Groves, W., Carp, O.
Haythorne, T. J., B.A., Charlottet'n,
Hughes, P. H., Strathroy, O. [P.E.I.
Kennedy, R. A., B.A., Cumming's
Kinloch, J. A., Montreal. [Bridge, O.
Kirkpatrick, R. C., B.A., Montreal.
Murray, D., Plainfield, N.S.
McCollum, E. P., Duart, O.
McCuaig, W. J., Vankleek Hill. O.
McGannon, T. G., Prescott, O.
McKay, J. M., River John, N.S.
Orton, T. H , Hamilton, O.
Osborne, A. B., Hamilton, O.
Poole, Alf., Wakefield, O.
Pomeroy, L. E. Mc., B A., Tweed, O.
Pringle, W. R., Cornwall, O.
Raymond, Alf, Moulinette, Q. [N.B.
Raymond, G. H., B.A., Springfield,
Robertson, F. D., B.A., Lennoxville,
Ross, L. F., B.A., Montreal. [Q.
Rowat, W. M., Manotick, O.
Schmidt, A. F., Montreal.
Schmidt, A. J., Fairbault, Minn.
Seery, F. J., Fredericton, N.B.
Thomas, W. R., Elkhart, Man.
Turnbull, R., Russell, O.
White, F. J., Greenspond, Nfld.
White, W. W., M.A., St. John, M.B.
Williams, J. F., Barrie, O.
Wilson, C. W., Cumberland, O.
Worthington, A. N., Sherbrooke, Q.

The following have passed in Anatomy :—

Bell, J. H.
Berry, J. A.
Beaudry, J. S.
Castleman, A. L.
Chalmers, W. W.
Lafferty, A. M.
McKinnon, G. W.
Metcalfe, F. T.
Porter, J. A.
Young, H. E.

The following have passed in Chemistry :—

Baer, D. C.
Cameron, J. J.
Campbell, G. G.
Castleman, A. H.
Cresor, J. A.
Dewar, C. P.
Hall, A. G.
Hubert, P. T. H.
Kerr, Norman
McPhail, J. A.
Moffatt, Robert
Patton, H. A.
Slater, H.
Taylor, W. B.
Wheeler, C. L.

The following have passed in Practical Chemistry :—

Baer, D. C.
Bayne, C. P.
Beaudry, J. S.
Creasor, J. A.
Dewar, C. P.
Ellard, J.
Esson, F. G.
Goodwin, W. W.
Greene, T. J.
Hamilton, A.
Hubert, P. T. H.
Irwin, W. T.
Kemp, H. D.
Kerr, Norman
Long, W. M.

McCallum, O. H.
McDonald, A. L.
McKinnon, G. W.
Metcalfe, F. T.
Moffatt, R.
Mowatt, M. M.
Slater, H.
Stewart, W. G.
Walker, S. L.
Wheeler, C. L.

The following have passed in Materia Medica and Therapeutics :—

Aylen, J. P.
Berry, J. A.
Cameron, K.
Cameron, J. J.
Dewar, C. P.
Donald, W. M.
Hall, A. G.
Quirk, E. L.
Young, H. E.

The following have passed in Physiology :—

Baer, D. C.
Bayne, C. W.
Beaudry, J. S.
Davis, A. H.
Goodwin, W. W.
Greene, T. J.
Hubert, P. T. H.
Kemp, H. D.
Kerr, Norman.
Long, M. W.
McKinnon, G. W.
Metcalfe, F. T.
Moffatt, M. Mc.
Quirk, E. L.
Stewart, W. G.

The following have passed in Medical Jurisprudence :—

Aborn, W. H.
Brunette, T. J.
Boone, S. W.
Blackader, E. H. P., [B.A.
Berry, J. A.
Boggs, G. W.
Boyd, Jay.
Brown, V. D.
Christie, W.
Cowie, A. M.
Cameron, K.
Davis, A. H.
Easton, C. L.
Ellis, W. E.
Edgar, C. I.
Evans, E.
Flagg, J. D.
Ferguson, W. D.
Fillmore, E. W.
Fraser, J. M.
Hamer, A. L.
Hall, W.
Haentschel, C. W.
Haythorne, T. J.
Johnson, J. W.
Kennedy, R. A., B.A.
Kirkpatrick, R. C., B.A.
Kelly, J. A. A.
Lafleur, H. A., B.A.
Loucks, W. F.
Leslie, A. C.
Lafferty, A. M.
McDonald, D. D.
MacDonald, A. D.
McKinnon, H.
Mackay, Eugene
Murray, D.
McDonald, A. L.
Norman, T. J.
Parker, W. D.
Pearman, H. V.
Pothier, J. C.
Pomeroy, L. E. Mc.
Richardson, G. C.
Reavely, E.
Ross, D. L.
Ross, L. F., B.A.
Scully, D. J.
Scott, J. M.
Springle, J. A.
Thomas, W. R.
Warneford, P. H.
Williams, E. P.
Woodruff, L. A.
Young, A. A.

The following have passed in Hygiene :—

Aborn, W. H.
Boone, S. W.
Brunette, J. T.
Blackader, E. H. P., [B.A.
Berry, J. A.
Boyd, Jay
Cameron, K.
Davis, A. H.
Desmond, F. J.
Easton, C. L.
Edgar, C. J.
Evans, E. J.
Ellis, W. E.
Ellard, J.
Fraser, J. M.
Ferguson, W. D.
Hall, Wm.
Haentschell, C. W.
Hewitt, J.
Hall, A. G.
Johnson, J. W.
Kelly, J. A. A.
Kerr, N.
Lafferty, A. M.
Leslie, A. C.
Long, C. H.
Loucks, W. F.
Lafleur, H. A.
McKinnon, H.
McRae, J. C.
Moffatt, R.
Murray, D.
McCarthy, J. G.
Metcalfe, F. J.
Norman, T. J.
Pearman, H. V.
Pothier, J. C.
Potts, J. M.
Parker, W. D.
Richardson, G. G.
Ross, D. L.
Scott, J. M.
Scully, D. J.
Springle, J. M.
Thomas, W. R.
Warneford, P. H.
Williams, E. P.
Woodruff, T. A.
Young, A. A.

The following have passed in Pathology :—

Aborn, W. H.
Blackader, E. H. P.
Boone, S. W.
Boyd, Jay
Christie, W.
Cowie, A. M.
Dickson, J. A.
Evans, E.
Easton, C. L.
Edgar, C. J.
Ellis, W. E.
Flagg, J. D.
Fillmore, E. W.
Fraser, J. M.
Gardner, A. W.
Hall, W.
Haentschell, C. W.
Hamer, A. L.
Haythorne, T. J.
Johnson, J. W.
Kelly, J. A. A.
Leslie, A. C.
Lafferty, A. M.
Loucks, W. F.
McDonald, A. D.
McKinnon, H.
McDonald, A. L.
Murray, D.
McDonald, D. D.
Norman, T. J.
Pearman, H. V.
Pothier, J. C.
Parker, W. D.
Reavely, E.
Richardson, G. C.
Ross, D. L.
Scully, D. J.
Thomas, W. R.
Warneford, P. H.
Williams, E. P.
Young, A. A.

The following have passed in Physics :—

Bayne, C. W.
Beaudry, J. S.
Brunette, J. T.
Cameron, J. J.
Ellard, J.
Hamilton, A.
Kerr, Norman
McGregor, J. G.
Quirk, E. L.

The following have passed in Botany :—

Aylen, W. W.
Booth, J. S.
Brown, G. A.
Campbell, G. G.
Delaney, W. J.
England, W. S.
Esson, F. G.
Fulton, C.
Garrow, A. E.
Gemmill, E. W.
Hamilton, A.
Holmes, A. D.
Hopkins, T. A.
Irwin, W T.
Jayet, A. C.
Low, D.
McCallum, O. F.
McCurdy, T.
McDonald, H.
McDonald, A.
McDonald, P. A.
McEwen, H.
McIntosh, D. H.
McKinnon, H.
McKinnon, T. H.
McLellan, A. A.
Martin, J. M.
Morehouse, O. E.
Mowat, M. M.
Muirhead, D. A.
Murray, D. A.
Philip, W. S.
Silver, H. J.
Shanks, A. L.
Smithson, R. H.
Taylor, W. B.
Travers, J. B.
Vipond, A. E.
Walker, S. L.
Whyte, J. J.
Young, J.

The following have passed in Histology —

Aylen, W. W.
Becket, G. G.
Beaudry, J. S.
Brown, G. A.
Brunette J. T.
Campbell, G. G.
Creasor, J. A.
Delaney, W. J.
Dewar, C. P.
Edgland, W. S.
Esson, F. G.
Fulton, C.
Garrow, A. E.
Gemmill, E. W.
Greene, T. J.
Hill, R.
Hopkins, T. A.
Holmes, A. D.
Jayet, A. C.
Kemp, H.
Low, D.
McKercher, H.
Murray, D. A.
McIntosh, D. H.
McCurdy, T.
McKinnon, T. H.
Martin, D. S.
Muirhead, D. A.
McDonald, P. A.
McEwen, H.
McDonald, A.
McPhail, J. A.
Metcalfe, F. J.
McLellan, A. A.
McDonald, H. N.
McRae, J. C.
Philip, W. S.
Quirk, E. L.
Stewart, W. G.
Slater, H. A.
Shanks, A. L.
Smithson, R. H.
Taylor, W. B.
Vipond, A. E.
Walker, S. L.
Whyte, J. J.
Wheeler, C. L.

The Holmes Gold Medal for the best Examination in the Primary and Final Branches is awarded to Herbert S. Birkett, of Hamilton, Ont.

The prize for the best Final Examination is awarded to Walter W. White, B A., of St. John, N.B.

The prize for the best Primary Examination is awarded to Wm. I. Bradley, B.A., of Ottawa.

The Sutherland Gold Medal is awarded to Wm. I. Bradley, B.A., of Ottawa.

The following gentlemen, arranged in order of merit, deserve honorable mention :—

Primary Examination—H. D. Fritz, B.A., N. D. Gunne, F. L. Kenney, B.A., J. R. Clouston, D. McLennan, R. M. Kincaid, A. D. McDonald, A. D. Stewart, B.A., A. E. Orr, O. H. Hubbard, A. E. Kirkpatrick, J. E. Orr, P. C. Park, and J. H. Kennedy.

Final Examination.—R. A. Kennedy, B.A., E. P. McCollum, F. D. Robertson, B.A., R. C. Kirkpatrick, B.A., T. J. Haythorne, B.A., W. C. Crockett, B.A., A. W. Campbell, J. B. Gibson, J. A. Kinloch, W. M. Rowatt, R. Turnbull, F. J. Seery, C. W. Wilson, Alf. Raymond, P. H. Hughes, J. F. Williams, J. R. Pringle, W. J. McCuaig, J. H. Y. Grant, T. M. Gairdner, A. N. Worthington.

PROFESSOR'S PRIZES.

Botany—Prize, G. G. Campbell.

Practical Anatomy—Demonstrator's Prizes: 2nd year, H. D. Fritz; 1st year, H. Slater.

Clinical Medicine—Junior Class, E. H. P. Blackader.

Obstetrics—H. S. Birkett, Hamilton, Ont.

A telegram was read from Professor Osler of Philadelphia, congratulating his students of Class '86.

The list was read out by Dr. R. P. Howard, aud the ceremony of "swearing and capping" the newly-fledged doctors was then proceeded with. Principal Dawson and Dr. Stewart officiated.

The ceremony ended, Mr. W. C. Crocket, B.A., of Fredericton, N.B., delivered the valedictory address to the college on behalf of the retiring students. In the course of the address he said :—"This occasion, so long awaited with happy expectation, brings with it mingled feelings of pleasure and regret. We feel a joyous satisfaction in completing a difficult though voluntary task and in obtaining from a school eminent in her sphere a recognition of our work. We feel as well, profound regret at

severing the association which, during our sojourn here, we have formed, and at bidding farewell to an Alma Mater who has been so watchful and so kind. In looking back over our course, we recall many pleasing incidents and many happy days. Alas! we recall, too, events which bring sadness to our hearts. We shall not soon forget the genial smile and kindly bearing of him who so endeared himself to us, who so often cheered us on and lured us to our work. Whatever assistance the late Professor Scott could render us was as pleasant to him as it was beneficial to us; seldom, indeed, were our interests absent from his mind. By his death we lost a faithful teacher and a warm-hdarted, loving friend. Though late to pay a tribute to the teacher whom we loved, we cannot allow the present occasion to pass without saying, at least, a word to his memory. Mr. Wilkinson, who has also passed from amongst us, had distinguished himself in another University, where he received that culture and discipline which he brought to bear upon his work while in our midst. A fact which has impressed us during our pupilage here has been the progressive character of the school. Every year has witnessed her advancement, while the past year has been an epoch in her history. But these recent improvements and incressed facilities are, we believe, only the beginning of that expansion which awaits her. The pathological department we shall watch with interest, confident that from its laboratory shall come forth even richer discoveries than the old and less equipped department has yet given to the world. To our clinical instructors we are especially indebted for much of the practical knowledge we have acquired. The recent concessions made by McGill to graduates in arts have been highly appreciated. They manifest a desire on her part to elevate the standing of her students by practically encouraging to her halls men who have enjoyed the advantages of a college training. In spite of much that was once seriously and humorously urged against it, the life of a medical student is not an unenviable one. The medical student can share in the delights as well as the sorrows of his fellow-men. He can live in another atmosphere than that which continually surrounds him. Opinions with regard to him have undergone a change. His surroundings were looked upon as tending to harden his nature and vitiate his mind to prevent the growth of the finer feelings and to limit his regard to his own peculiar sphere. McGill has done her duty toward us, may we never bring discredit upon her. We shall many a time, I doubt not, when in anxiety and perplexity, recall the years just passed when free from care we sallied jocund through those college halls, and wish for a return of these happy days. Even happier days than we have enjoyed may yet mayhap await the men who shall come after us to pursue the path that we have trod. Who can tell but future years may give to them fair companions in their work? Who can tell but songs now sung in base discordant notes shall be attuned with sweet soprano sounds? Who can tell but from this desk a tender voice shall speak a last farewell? Who can tell but from those chairs now ably filled a woman shall discourse? But drop the scene—a woman's sphere is in her home. In

taking leave of our professors, we have to remember their many acts of kindness. To the citizens of Montreal we are grateful for many favors." (Applause.)

Dr. Gardner then, on behalf of the Faculty, addressed the graduates. (See page 577.)

The Hon. Senator Ferrier, Chancellor, then delivered the following address:—"To one who, like myself, has been connected with this University for 41 years, the present occasion is one that invites to a retrospect of the history and growth of the Medical Faculty, whose report, presented at this meeting of convocation, and the 46 candidates for the degree whom it has brought up to-day, show that as it was our first faculty in the early history of the University, it is also our strongest and most vigorous up to this time. It is to be observed here that from the first the curriculum of the Faculty was based on the highest standards in the universities of the mother country, in which, in consequence, our Faculty of Medicine has always enjoyed a full recognition for its students and graduates. In 1824 the medical institution of Montreal was founded by Drs. Stephanson, Holmes, Robertson and Caldwell, and in 1829 it became the Medical Faculty of McGill University. In that year the Medical Faculty was constituted with four professors, and the Faculty of Arts with two. The wise action of the Board of Governors at that time, in adopting the young and vigorous medical school, gave to the University at once a nucleus of educational work, and enabled it to carry on its operations through a long period of early struggle. The growth of the Medical Faculty, with the exception of the years of political disturbance, from 1833 to 1839, has steadily advanced, and its progress has been as marked within the few last years as ever before. More especially the liberal endowment contributed by the Hon. D. A Smith and by other citizens of Montreal, and the new buildings completed last year, with the extension thereby given to the practical work of the Faculty, have placed it on a vantage ground which appears to ensure a long career of increased usefulness. As an illustration of the growth of this Faculty, I may mention that the copy of the annual announcement issued in 1853 was a very modest pamphlet of ten small pages. It contained a list of about fifty students and the names of six graduates who had taken their degrees at the previous convocation. Yet even this old announcement contains the names of ten professors, besides that of the present Dean, who was then the demonstrator of anatomy. The instructing officers of that time have all passed away, with the exception of the two juniors. The professors then were Holmes, Campbell, Hall, McCulloch, Bruneau, Crawford, Scott, Fraser, Sutherland and Wright. Of these men, the two seniors, Holmes and Campbell, long presided over the faculty as deans, and all the other names earned a well deserved reputation as academical and professional instructors. Such men, and the eminent men who have preceded them, have given strength and character to the Faculty and to the University itself. The calendar of the present year presents a strong

contrast to that of which I have just spoken—for it is a pamphlet of some ninety-four pages, and shows the growth of this department of McGill, from its small beginning to its present magnificent status. The present dean and the staff of professors associated with him are the worthy successors of the founders and early professors of the Faculty, and we hope to recognize this fact at the April meeting of the convocation by conferring the degree of Doctor of Laws on Dr. Howard."

Sir William Dawson then extended the congratulations of the other Faculties to the gentlemen on whom the degrees had just been conferred. Especially did he congratulate the men who had taken an arts course in addition to the medical. He trusted that the old students would always maintain feelings of love for their old University, and the professors in return would always be ready to do what they could for them. (Applause.)

Medical Items.

—Sir William Jenner has been re-elected President of the Royal College of Physicians.

—A proposition to establish a Post-Graduate School in London, Eng., is being agitated.

—Dr. E. G. Janeway has been appointed to succeed the late Dr. Flint in the chair of Medicine of Bellevue Medical College.

—The Contagious Diseases Acts of Great Britain, by which prostitution was regulated in a number of the garrison and seaport towns, have been repealed by a vote of 245 to 131. The *Lancet* expresses regret at the repeal, and says that henceforth "disease and immorality in their most revolting forms are to riot in the midst of our garrison towns."

—Dr. McWilliam, the Assistant Professor of Physiology in University College, London, has been appointed Professor of the Institutes of Medicine in the University of Aberdeen, *vice* Professor Stirling, who has accepted the chair of Physiology in the Victoria University. Dr. McWilliam has published numerous researches on the functions of the heart in various animals, which are of great importance.

—The Carlyle Memorial Tablet, recently set up in Cheyne Row, Chelsea, could not be placed on the house so long inhabited by the Scotch sage. It was found impossible to obtain the neces-

sary permission. It is remarked as not a little curious that the house of this great denouncer of quacks should now be the property of the proprietor of a quack medicine. Perhaps the reason for the refusal grew out of the quack proprietor, after buying the house, taking to reading Carlyle's works for the first time from simple curiosity, and suddenly coming upon the Cagliostro essay, or some other work in which quacks are lashed with fury.

A Man of Many Talents.—One of the most versatile of medical men of the present day is Sir Henry Thompson. He attained eminence many years ago in his own profession, specially distinguishing himself in the field of urethral surgery. He is also well known as an artist, having frequently been an exhibitor at the Royal Academy. He is not unknown as a writer and speaker, having on several occasions championed the cause of temperance reform. He is now busy with a new novel, and bids fair to attain equal renown in the field of romance.

Poisonous Wall-Papers.—A bill has been submitted to the Massachusetts Legislature prohibiting the manufacture and sale of wall-papers containing more than one-fourth of a grain of arsenic to the square yard. Dr. Edward S. Wood claims that arsenic is sometimes put into paste to prevent its souring. It seems that a law permitting the use of arsenic to the extent of one-half grain to the square yard, as required by English law, would answer the case. In Germany, Sweden and Bavaria the law forbids the sale of arsenical wall-papers.

—Messrs. Wyeth & Bro. claim for their Liquid Malt Extract superiority over any other in the market. The small percentage of alcohol it contains renders it a safe and effectual preparation when given to the most delicate infant or invalid.

—Wm. H. Day, M.D., M.R.C.P., M.R.C.S., &c., 10 Manchester Square, London, W., says:—I like the preparation Bromidia. In the cases in which I have prescribed it, it has had the effect of tranquillizing the nervous system and inviting calm sleep.

CANADA

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MEDICAL HISTORY OF LOUIS DAVID RIEL DURING HIS DETENTION IN LONGUE POINTE ASYLUM.

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According to my physical idea, an intellectual, moral man is a physiological man, a sane man, and a *non*-criminal.

According to my physical idea, all criminal men are either insane from pathological defect, or fools from teratological defect, of the psycho-physical organization, the materia cogitans.

According to my close observation of the insane, a large majority of them know right from wrong. Therefore, a man's knowledge of his idea of right and wrong is no proof of his sanity.

The law's definition of sanity and responsibility is, that a man who is a criminal, and knows right from wrong, is a sane man, and responsible for his conduct.

According to my observation, Louis David Riel had a perfect knowledge of what he believed to be right and wrong, but being a great criminal, and guilty of bad conduct, I considered him a fool, in virtue of a teratological defect in his psycho-physical organization.

I think his friends knew my idea of him; and therefore it was that they did not bring me to give evidence in his case when he was on trial. My evidence would have been that I believed him a teratological fool, but that, according to his idea, he knew right from wrong.

As I have already explained, I consider every criminal to be

either a fool or insane because of pathological or teratological defect in their psycho-physical organizations; and most certainly I have known many persons *hung* for murder that gave stronger proofs of being insane or fools than was given by Louis D. Riel.

I wish law-makers were physiological men, and were governed in making laws by physical science or natural physiology; then all criminals would be recognized as insane or fools.

As the Dominion Government has been justified in their conduct by a large vote of the House of Commons, and the Provincial Government has been justified by a large vote of the Legislative Assembly, I shall give the history of Louis D. Riel while he was under my care in the asylum of St. Jean de Dieu. What I am about to write is the truth. I am not guided by politics, nor by nationality or religion. I write it for the sake of physical science, and I am writing from notes that I have kept that cover nine pages of foolscap.

Now, in the registry books of Longue Pointe Asylum it is recorded that Louis David Riel was admitted into that institution under the name of Louis R. David on the 6th of March, 1876, and discharged from thence and sent to Beauport on the 15th of January, 1877. How that record was made I do not know? The public has accepted it as a *true* record, and all the public-speaking that I have heard of, and all the newspapers that I have read, have all been acting under the impression that Louis David Riel was in the asylum at Longue Pointe from the 6th of March, 1876, to the 15th of January, 1877. Now, although I blame no one, I have to testify that the record is *not true*. On the contrary, Louis David Riel was discharged from the asylum at Longue Pointe and sent to Beauport on the 19th of May, 1876. So that instead of being in the asylum for ten months, he was only in it two months and thirteen days. During that time I was physician to the asylum, having no power in it to either admit or discharge patients, but simply prescribe for them; yet it was by my advice that Louis David Riel, under the name of Louis R. David, was admitted into the asylum by the Mother Superior, as a Government patient, on the 6th of March, 1876, and by my recommendation to the Hon. Provincial

Secretary, he was sent to Beauport on the 19th of May, 1876. I am particular in pointing out that he was discharged at *my* recommendation, because in all other cases I could discharge no one, except advised by the Mother Superior, and Dr. Perrault had to sign the paper with me. But in this instance there was no legal form.

With the foregoing information, many gentlemen will be wonderfully surprised and regret their speech.

How did Louis D. Riel get admitted into the asylum of St. Jean de Dieu at Longue Pointe on the 6th of March, 1876?

On or about the 5th of March, 1876, the Rev. Mother Superior came into the office where I was and told me there was a gentleman in the other room who desired to get a patient admitted, but as there were serious circumstances connected with the case, she refused to admit him without my consent, and if I would go into the room with her she would introduce me to her visitor. I did go with her, and she introduced me to the gentleman who was making the application on behalf of one with whose antecedents and present condition he claimed to be entirely familiar. There was, at first, some hesitation with reference to the identity of the person in question. Finally, it was admitted that the individual was Louis Riel: and I was informed that his excitement was exhibited chiefly when political subjects were introduced, and that his friends were anxious to see him safely guarded till they could get him out of the country. His eccentricities had already produced such animosity amongst certain sections of the people, that fears were entertained for his life should he be left at liberty.

I at once cheerfully consented to the proposition to have Louis David Riel admitted into the asylum the following day under the name of Louis R. David, and said I would do all I could to have his secret kept from sisters, keepers and strangers, as if he were insane, and I faithfully did keep my word for nearly ten years, always, when spoken to of him, declaring him to be as mad as a loon.

Am I ashamed of what I did? Not a bit of it. I believed him to be guilty of the murder he was accused of, and I believed

every murderer to be either insane or a fool. The unfortunate man was not flying from justice ; he was evading fanatics, that, judging them by the press of that day, were prepared to imbrue their hands in his blood. Yes, under similar circumstances, I would conceal him again had he turned up a second time, or any other man similarly situated.

From the foregoing statement it will be seen that Louis D. Riel was placed in the asylum of St. Jean de Dieu as one of an uncertain condition of mind who required watching, and, for the time being, to protect him from his enemies ; and knowing all these circumstances, I recommended the Rev. Mother Superior to admit him into the asylum as an insane man. And to be just to the Mother Superior, she let me understand that she preferred not to admit him, and she always wished him removed.

HIS ADMISSION.

On the 6th day of May I was sent for in the part of the asylum I was employed, and told to come and see Mr. David, who had arrived. I went into the room and saw the following tableau : A fine, handsome-looking man of about 30 years old, standing about the centre of the room ; near to his right hand, Jean Baptiste, a keeper ; near to his left hand, William ——, a keeper ; standing opposite to him, one of the Sisters, not the Mother Superior ; and on the floor, his leather valise.

I was struck with the man's appearance. He looked an upright, honorable gentleman, and judging him by his appearance, I would never have supposed he could be guilty of the crime of which he was accused, and at the moment, I felt great pity for him, and considered his friends should have done better for him than to send him into an insane asylum.

I walked directly up to him, to shake hands with him, and said, "I am glad to see you, Mr. David ; my name is Dr. Howard." He started back and said, "Why do you call me David ? My name is Louis David Riel," and thrusting his hand into the side pocket of his coat, he took from it a small prayer-book, and opening it at the fly-leaf, handed it to me, saying,

"Look at my name there, Louis D. Riel, written by my dear sister." Quick as a flash of lightning, the Sister that was present snatched the book from our hands and tore out the fly-leaf, which she tore into pieces, saying, "You are only known here, sir, as Mr. David." A terrible scene followed, and I believe if the guardians and I were not there, and she had not cleared out of the room, he would have torn her in pieces. For a few moments I certainly never saw a man more angry. When he calmed down, the poor fellow wept, and turning to me, said, "That was a gift given to me by my dear sister on my birthday, and in all my wanderings I always kept it near my heart." I may here mention that after this every one in the asylum knew who he was, and he always spoke of himself as Louis D. Riel.

Some time after, the keeper William disappeared from the asylum, and John Batiste has lately died of smallpox.

After the row, Mr. Riel went to his room, and from that day to the last day I saw him, May 13, 1876, he and I were the best of good friends, and I learned to value him highly. As a proof that he thought well of me, I beg to quote the following, taken from the *Montreal Star* of August 8, 1885. The article is headed "*Riel Loquitur. The last day but one of the trial at Regina.*"—"Grateful to my captors for their kindness to me at the very time the newspapers were raging to devour me. I thank the glorious General Middleton for his testimony that I possess my mental faculties. I felt that God was blessing me when these words were pronounced. I was in Beauport Asylum. Dr. Roy, over there, knows it, but I thank the Crown for destroying his testimony. I was in the lunatic asylum at Longue Pointe, near Montreal, also, and would like to see my old friends, Dr. Lachapelle and Dr. Howard, who treated me so charitably. Even if I am to die, I will have the satisfaction of knowing that I will not be regarded by all men as an insane person."

HIS EDUCATION AND RELIGION.

I found Riel a well read man. He was well posted in both Greek and Pagan philosophy, and it appeared to me he respected both better than he did Christianity; and he certainly spoke most respectably of Judaism, although he found fault with the

Jews for having crucified Christ. He certainly ridiculed Protestantism as all humbug, and was far from considering Catholicity what he considered it should be. He never appeared to me to be a sincere Catholic, and he certainly did not speak respectfully of bishops, priests, or nuns.

I never saw him contented or happy in the asylum. He always spoke to me as one deceived by his friends and forsaken by them, and he felt that he was a prisoner, and daily urged upon me to procure his release and have him sent out of the country.

Sometimes he made some strange, ridiculous statements, but in such a way that I always felt he was simply humbugging, and did not believe what he was saying. For example, he at one time called himself Christ, that was crucified on Calvary, and was at that time undergoing another crucifixion. Another time he told me that it was lawful for a man to have at the same time three wives.

I never could satisfy myself thoroughly as to whether this sort of talk was not acting a part or an hallucination. He generally spoke to me as intelligently as any one could. He was not by any means a cheerful man, nor could I say he was sad, considering his position and surroundings. In fact I found him a loving and loveable man, and a charming man in conversation.

INCIDENTS WHILE HE WAS IN THE ASYLUM.

One morning I found him in the cell naked, with the exception that he had on a long straight-waistcoat. He began to laugh at his ridiculous position. I asked him what was the matter, and he told me that his leather valise had been cut open the night before and his letters taken out of it, which proved to him that it was to rob him of these valuable letters that he was brought into the asylum; that the loss of them was to him the loss of friends and their support and protection. He named his friends. He told me, when he saw that he was robbed of his letters, he was very angry and made a row, and that he was immediately seized by the keepers and forced into the straight waistcoat. This was a very short time after his admission into the asylum. From that time till he left the asylum he was sad, and seemed

to be very suspicious of every one surrounding him, and particularly of his friends. He urged me to send him out of the asylum.

On another occasion, some time after, I found him in a similar position, restrained with the straight waistcoat. Before visiting him, I was told that while the priest was celebrating mass he rushed into the church with a long stick, used in the game of pigeon-hole, in his hand, and literally swept the candles, ornaments, etc., with it off the altar. When I visited him he was all smiles, and told me he did it to see how the Mother Superior would act when he played the brute, as she did not know how to act or treat him when he acted as a gentleman. I advised him to keep quiet and continue to act the gentleman.

Soon after this, late in the month of April, I went one morning into his room and found him stark naked, standing up against the wall with his arms extended as if crucified. He told me he wanted the nuns to see him. I told him to go to bed. He did so, and spoke to me quite rationally.

One morning, about the 16th or 17th of May, 1876, I went into his room and found him in a great state of anxiety. I had never seen him before showing such great fear, nor did I ever see him speak or act so intellectually. He declared he was afraid of being murdered, and drew my attention to the fact that during the night the bars were removed from his window that he might try to escape. I looked and saw that the bars were removed, and that he could have escaped without any trouble. He said, "If I escaped last night through that window, I would have been murdered. Say nothing about it. I won't speak of it to any one; but for God's sake try and get me away."

The mother superior had constantly spoken to me to write to the Hon. Provincial Secretary to have him removed to Beauport. She particularly spoke to me for the last week or ten days, as she had heard it reported that the Orangemen of Montreal had heard that Riel was in the asylum, and had threatened to come down and burn it.

I did not speak to her of the iron bars being removed, nor of my intention, but I wrote a very strong letter to the Hon. Provincial Secretary, begging of him to send an order at once to have Riel removed to Beauport, for I feared for his life. On

the 18th of May I shook hands warmly with poor Riel and bid him good-bye. On the 19th he departed, and I never saw him again. The keeper that placed him on the steamboat for Quebec that evening told me nothing more than that he called loudly for me when the boat was starting.

What I have written of poor Louis D. Riel I have not written for politicians nor for nationalists. I have simply written for the sake of imparting knowledge to the physical scientist or natural philosopher. I admitted Riel simply to protect him from his enemies, and for the same reason I recommended his discharge. I suspect his friends knew these facts, and that was why I was not brought to give evidence on his trial; because, if I were asked, "Did he know right from wrong?" I would have been obliged to answer "Yes." From his own statement on his trial, he was pleased to think I did not consider him *insane.* But I did consider him an abnormal man, a man with a teratological defect in his psycho-physical organization; and if he was guilty of the crime of which he was accused, and I believed he was, he was guilty because he was like all other criminals—not an intellectual man, but a fool, one of the millions of the immoral, criminal fools that I have already written of.

I found Riel to be a cautious, cunning man, and as responsible for his conduct as any other criminal; but I don't consider any criminal responsible for his conduct, for every criminal is such because of his abnormal psycho-physical organization.

While poor Riel was with me in the asylum, I have no recollection of ever speaking of him to any one but once—to two gentlemen, great friends of his, whom I overtook upon the road below the toll-gate. They were walking, and told me they were going down to see him. I took them down in my carriage. I told them he was as mad as a loon. They both laughed at me.

When I heard poor Riel was hung, I was very, very sorry. But I have known other men to have been hung that were greater fools than was poor Riel. I don't believe society should be troubled with criminal fools, but I do not believe they should be hung, although I see that the House of Commons in England has just rejected a motion to abolish capital punishment by a vote of 117 to 62. Well done, members of parliament, who don't

know the physical cause of physical defect: who don't know that a man is an immoral criminal because he is not a physiological man.

SKETCH OF THE EARLY HISTORY OF ANATOMY.

By FRANCIS J. SHEPHERD, M.D.,
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(*Continued from p.* 398.)

With the 16th century, we come to a period in which anatomy made marvellous progress, more than it had made for fourteen hundred years previously, and many good anatomists were produced. Early in the century, James Berenger of Carpi was professor of anatomy at Padua and afterwards at Bologna. He is said to have dissected over one hundred bodies, and made not a few discoveries. He correctly described the heart and great blood-vessels, brain, ear and larynx, and gave a very clear account, illustrated by woodcuts, of the abdominal muscles.

Berenger, although a celebrated anatomist, is better known as the introducer of mercurial inunction in the treatment of syphilis, a disease which at this period was spreading with great rapidity in Europe, and which was then of the most virulent type. The whole of Europe was alarmed, and Berenger's discovery lessened to a great degree the severity of the disease and calmed the fears of the people. By the use of his remedy he accumulated an immense fortune, which he left, on his death, to his patron, the Duke of Ferrara. At one time Berenger had to leave Spain because he was accused, as Vesalius was after him, of opening a living body in order to observe the movements of the intestines.

The French School of Anatomy arose in the early part of the 16th century, and all anatomical students are familiar with the names of the great men of that school—names such as Dubois (Sylvius), Etienne, the discoverer of the canal in the spinal cord, and others. It is a curious fact that the French anatomists knew nothing of what had been done in Italy by Mundino and his successors, but followed Galen closely and had a remarkable admiration for ancient authorities. They rarely dissected human

bodies, but contented themselves with such lower animals as dogs, cats, pigs, etc.

One of the most independent observers and investigators who lived during the first half of the 16th century is Michael Servetus, a Spanish physician. He was educated in medicine in the University of Paris under the assumed name of Michael Villeneuve. Servetus soon quarrelled with the Faculty in Paris, owing to the peculiar views held by him regarding astrology and divination. He early developed a taste for controversial theology, and discussed various theological questions with the leading Reformers, among others, Calvin, whose hatred he soon aroused. When Servetus published anonymously his great work, "*Christianismi Restitutis*," which was alleged to contain heretical doctrines, he afforded Calvin the long sought-for opportunity of condemning him as a blasphemer and heretic and most cruelly consigning an innocent and eminent man of science to the flames. It is in this condemned work we find the first clear account of the circulation of the blood through the lungs—that is, its transfer from the right to the left side of the heart, through the lungs. It is not announced as a new and important discovery, but is merely mentioned incidentally in this theological work addressed not to scientific men but to the Reformers and Schismatics. This is a clear proof that the importance of the discovery, which paved the way for Harvey's greater discovery of the systemic circulation, was not at that time realized.

The greatest anatomist of the 16th century, and perhaps the greatest the world has ever seen, is Andreas Vesalius.

Vesalius revolutionized the teaching of anatomy, and a new epoch of anatomical progress dates from the publication, in 1542, of his great work, "*De Humani Corporis Fabrica.*"* For fourteen hundred years previous to his time, anatomists and physicians reverently bowed before the shade of the great Claudius Galenus, and accepted all his statements as inspired. Vesalius

* The University of Basle still possesses a skeleton prepared by Vesalius when he came to Basle from Padua for the purpose of seeing his great work, "De Humani Corporis Fabrica," through the press of Io. Oporinus. The skeleton is that of a man named Jacob Karrer, beheaded whilst Vesalius was in Basle, and who furnished the great anatomist an opportunity of instructing the students at Basle in a new anatomy not then to be learnt from books.

had no sympathy with this feeling of the old school of anatomists, and was one of the first to throw off this yoke of authority which so long encumbered them. He asserted that theory should be based solely on experiment, and observation and anatomy on actual dissection. When only 28 years of age, he published his great work, and in it he, without any respect for authorities of previous ages, exposed and corrected numerous errors which had been perpetuated since the time of Galen. He denied that Galen could not be wrong, and utterly scouted the idea of his inspiration, which had been held by medical men for so many centuries. The publication of his great work called forth an angry storm of abuse, the author was denounced as a dangerous man, and was accused of licentious criticism,* as William Hunter says, "The spirit of opposition and emulation was perfectly aroused; and Sylvius in France, Columbus, Fallopius and Eustachius in Italy, who were all in high anatomical reputation about the middle of the 16th century, endeavored to defend Galen at the expense of Vesalius. In their disputes they made appeals to the human body, and thus in a few years our art was greatly improved." Vesalius was undoubtedly a man of great genius. He had a wonderful capacity for work, and a profound knowledge of the human body. He is spoken of as a man who was "a fluent speaker and master of an admirable style," and also an "ornament to the 16th century and the admiration of the following ones."

Vesalius was born at Brussels on the 30th of April, 1514, and was the son of the apothecary to the Archduke Charles, afterwards Charles V. He developed a passion for anatomy at a very early age, for while yet at school he amused himself dissecting rats, dogs, moles and cats. He studied at Louvain, then went to Cologne and Montpelier, and thence to Paris, where he studied anatomy under Sylvius. Here he remained three years, and by his great dexterity and success in dissection, and intense application, he soon equalled, if he did not surpass, his master. He was frequently invited by both professors and students to give public demonstrations in anatomy.

* Even his old friend and teacher, Dubois (Sylvius), denounced him.

Vesalius also studied under Johann Winther, the well-known anatomist who first accurately described the pancreas, and was for his numerous scientific acquirements ennobled by Charles V. Whilst in Paris, the war between Francis and Charles V. broke out, so Vesalius went to the low countries and served as physician and surgeon from 1535 to 1537. At the end of the latter year he travelled to Italy, and was made professor of anatomy at Padua at the age of 24. Here he remained till 1543. Whilst professor at Padua he published his great work (1542). In 1544 Charles V. appointed him chief-physician to the Court, and when that prince abdicated in 1555, Vesalius continued in the same position under Philip II. It was here he established his reputation and passed the most brilliant portion of his life. In 1564 there died under his care a Spanish nobleman, and not knowing the cause of death, he asked permission of the relatives to make a post-mortem examination ; this was granted him, and on opening the body it is said that some of his assistants perceived that the heart was still beating. The patient's friends were immediately informed, and being naturally indignant at the circumstance, denounced Vesalius to the Inquisition. He was tried and condemned to death by this tribunal, but the king interfered and would not allow the sentence to be carried out, and Vesalius was ordered to make a pilgrimage to the Holy Land to atone for his supposed crime. Whilst passing through Venice he was appointed to the chair of anatomy at Padua, vacant by the death of Fallopius. He accepted the appointment, but had to complete his pilgrimage before entering on his duties. But, alas! his evil destiny still pursued him, and he never more set his foot on Italian soil, for on his return from Palestine, the vessel in which he sailed was wrecked on the island of Zante. Vesalius escaped to land, but died miserably soon after from hunger and exhaustion in the 50th year of his age (1564). Thus perished one of the greatest anatomists the world has ever known ; he must ever excite our respect by his extensive knowledge and wonderful powers of observation. Considering the crude state of anatomy when Vesalius appeared upon the scene, and the perfection at which it had arrived when

he left it, we may well wonder how it was possible that the energy and genius of one man could have accomplished so much in so short a time. His great work, which might still be referred to with advantage by modern anatomists, was published, as I have already stated, when its author was only 28 years of age.

Vesalius' anatomical works were long looked upon as authorities, and were translated into many languages, including English. His great work was illustrated by John of Calcar, a pupil of Titian's, whose pictures, it is said, were often mistaken by good judges for those of his master.

The last edition appeared in 1725, and was edited by Boerhaave and Albinus, the latter a great anatomist, as his works testify.

Vesalius had accomplished so much by his originality, independence, and disregard for ancient authority, that others, stimulated by his example, were also encouraged to throw off the trammels of the old divinities of medicine and observe for themselves. Many able anatomists now came to the front, some of whom obtained great celebrity. Such men were Eustachius of San Severino, Fallopius (a pupil of Vesalius), Colombo, Aranzi, Varolius, and many others.

Eustachius, who was a contemporary of Vesalius, though not entitled to the same great reputation, was styled the founder of anatomy. He was a devoted follower of Galen, and blamed Vesalius much for abusing so great a man. He also charged Vesalius with describing in his work a dog's kidney in place of a human one, a fault similar to that with which Vesalius charged Galen. Eustachius was the first to accurately describe the internal ear and the tube from the throat to the ear, which is still called the Eustachian tube. He, also, was the first to describe the thoracic duct, which he saw in the horse. He discovered the supra-renal capsules, and described many other structures accurately for the first time. In his finer dissections he used magnifying glasses, and separated complicated parts by injection and maceration. Eustachius published a few works in his lifetime, but, from want of means, his anatomical plates, which were ready in 1552, were not published, but remained in the Papal Library till 1714, when, having been accidentally found, they

were published by Lancisi. Lauth observes that if Eustachius had been able to publish them himself, anatomy would have advanced much more rapidly, as many of the discoveries afterwards made by observers in the 18th century were anticipated in this work of Eustachius. The last edition appeared in 1790, and even as late as 1830 his plates were much valued for their anatomical exactness. Eustachius was professor of anatomy in the University of Rome, and died there in 1574.

Fallopius, a pupil of Vesalius, was professor of anatomy, first at Pisa and afterwards at Padua. He accurately described various parts about the ear, which still bear his name.* He paid great attention to the organs of generation (as the "Fallopian tube" testifies), and published a large work on anatomy in 1561, which went through many editions.

Columbus was also a pupil of Vesalius, and described the circulation of the blood from the right to the left side of the heart six years after Servetus. He is supposed by many to have first taught it to Servetus.

The name of Cesalpinus (1519-1603) is more interesting to physiologists than anatomists, as it is identified with the circulation of the blood. Although a contemporary of Vesalius, he outlived him fifty years. Not knowing what had been done previously by Servetus and Columbus, he rediscovered the pulmonic circulation, and was the first to use the words "circulation of the blood." He no doubt had some vague idea of the circulation, but his descriptions show by their obscurity that he did not fully comprehend, not merely the systemic circulation, afterwards discovered by Harvey, but the pulmonary circulation so accurately described by Servetus and Columbus. From the very obscurity of his language, which may be made to mean anything, his admirers in Italy to-day call him the discoverer of the circulation of the blood, and have quite recently erected a monument in his honor, in the inscription on which they give him all the credit for this great discovery and brand Harvey as a plagiarist.

There were several other noted anatomists who flourished in

* Aqueductus Fallopii, which transmits the facial nerve, and the Hiatus Fallopii for the petrosal nerve.

this century, and who have left their impress on anatomy and anatomical nomenclature. Among these I might mention Arantius, professor of anatomy at Bologna, Varolius of Bologna, who is known for his researches on the anatomy of the brain, Coiter of Groningen, distinguished for his work on the cartilages, and others of lesser note.

We now approach near the time when that great discovery, the *circulation of the blood*, was in the air, and on the brink of which discovery men hovered "without effecting it." Their minds were so obscured by the theories of centuries that they could not divest themselves entirely of the incubus. Such unmeaning terms as *vital spirits*, *animal spirits*, etc., are so mixed up with their descriptions, that it is difficult for a modern to understand exactly what they mean. The puzzle to them was, first, how the blood got from the right to the left side of the heart. For centuries it was believed that the left side of the heart received air from the lungs by the pulmonary artery, which, when mixed with blood, became "spirituous blood." This blood was supposed to pass through invisible pores, in the division between the right and left sides of the heart. The circulation through the lungs was discovered, as I have above remarked, by Servetus and Columbus, but the greater systemic circulation —that is, the circulation of blood from the heart through the arteries and back again by means of the veins to the heart— was not discovered for many years after (1619). Cesalpinus, as we have seen, had only the most vague notions of this circulation, although he was the first to use the term.*

The next step forwards was the demonstration, by Hieronymus Fabricius ab Aquapendente, of the valves of the veins. Fabricius, who was a pupil of Fallopius, and afterwards succeeded him as professor of anatomy at Padua, first publicly showed the venous valves in 1574. At that time the blood was believed to go from

* Hamilton (History of Medicine, 1830) says the true theory of the circulation was known to Plato, and quotes a passage from Timæus, as follows: "But they (the Gods) established the heart, which is both the fountain of the veins, and the blood which is vehemently impelled through all the members of the body in a circular progression." The author offers the following curious remarks regarding this passage: "Can we suppose," he says, "that this was one of those scattered fragments of divine revelation to man in his state of primœval innocence and simplicity, which were gradually obliterated with the other traces of his celestial origin."

the heart, through the veins, to the extremities, so Fabricius failed to arrive at the correct solution of the use of the valves. He held that they retarded the flow of the blood and prevented over-distension.

Fabricius and his successor, Julius Casserius, may be regarded as the last of those illustrious Italian anatomists who established anatomy on a solid scientific basis, and paved the way for the great discovery of the circulation.

Fabricius had for his pupils the immortal Galileo and William Harvey, to whom Aquapendente, no doubt, demonstrated the valves in the veins, and so prepared the way for his later discovery regarding the influence of the valves on the direction of the blood current. The Italians are now claiming that not only did Harvey plagiarize from the works of Cesalpinus, as related above, but was actually taught the circulation of the blood by Fabricius ab Aquapendente, notwithstanding the fact that the published works of the latter show his actual knowledge of the circulation to have been most obscure. Still we must regard Aquapendente as the man who inspired Harvey, who, without his teaching, would probably never have made his immortal discovery.

William Harvey was born in 1578, and received his early education at Cambridge. In 1598 he went to Padua, and graduated as Doctor of Medicine in 1602. On his return to London, full of new thoughts and theories on the circulation of the blood, he entered into general practice, and some years after was appointed lecturer on anatomy to the College of Physicians. At the College he lectured on "the motion of the heart and the circuit of the blood," and illustrated his lectures by dissections and experiments. He taught his new doctrines as early as 1619, though he did not publish his work "*De Motu Cordis*" till 1628. This work is a very clear exposition of his doctrine, and free from the obscurity and ambiguity of the works which had before been published on the subject. Harvey never could find the direct connection between the arteries and veins which Galen declared existed, but believed the blood was transmitted from the arteries to the veins by means of the porosity of the organs. The finding of the capillaries, which connect the arteries

and veins, was a later discovery, when the means of research became better and more accurate.

It would be useless for me to try and describe all the important anatomical discoveries which took place in the 17th century, or to give, even shortly, an account of the great anatomists of that period. The anatomical canvas is crowded with celebrated men, such as Van Horn, professor of anatomy at Leyden, Aselli, who discovered the lacteals whilst demonstrating the nerves in the living dog, De Graaf, who discovered the Graafian vesicle in the ovary, etc. The names of De la Boe, Pauli, Wesling, Highmore, and Pecquet are all connected with discoveries in the lacteal and lymphatic systems. The honor of discovering the difference between the lacteals and lymphatics is divided between Jollyffe, an Englishman, and Rudbeck, a Swede. Further discoveries in these systems are associated with the names of Bartholini, Wharton, Blaes, Nuck, and Swammerdam.

From 1650, anatomists began to study the human frame more minutely, and organs and tissues were more closely investigated. Glisson's name is associated with the liver, Wharton's, Wirsung's and Steno's with the glands and their ducts, and Willis' with the brain and nervous system.

One of the most distinguished anatomists of the 17th century was Thomas Willis, who, with Wren, Millington, and Lower, made some remarkable discoveries in the nervous system. Willis was the first to number the cranial nerves, and the circle of blood-vessels at the base of the brain is called after him, the "circle of Willis." The 17th century has a great number of Englishmen among its celebrated anatomists. The 16th century, with the exception of Harvey, produced no English anatomist of note. Those who wrote works on anatomy were mere copyists, and their books are of little value.

About the middle of the 17th century, magnifying glasses were first made much use of in the prosecution of anatomical investigations. Malpighi, with whose name the use of the first simple microscope is associated,* very greatly advanced our

* Hooke and Nehemiah Grew first employed the microscope for the minute examination of plants and animals about 1650.

knowledge of minute anatomy, or histology, as it is now called. He it was who first laid the foundation of this, now separate, science. In this he was ably seconded by Leewenhock of Holland. The circulation was now first actually seen in the transparent parts of animals ; the blood corpuscles were discovered by Leewenhock. Malpighi first demonstrated that thin tubes or capillaries intervened between the veins and arteries, and not, as was supposed by Harvey and previous anatomists, cells and spongy substance. Leewenbock discovered the presence of scales in the cuticle, corpuscles in the milk, and spermatozoa in the seminal fluid.

I can only mention such names as Ruysch, Albinus, Brunner, Peyer, Duvernay, Cowper, Wrisberg, Vieussens, Meibomius, Spigelius, Valsalva, Santorinus, and Morgagni, all men of note, and who, in no small degree, advanced the science of anatomy. The three last in the above list especially, were remarkably accurate in their descriptions, and in this respect fully a century in advance of their contemporaries. Winslow, who flourished at the beginning of the 18th century, was a native of Denmark, and settled in Paris, where he became not only a naturalized Frenchman, but a convert to Catholicism. He was the first to write an anatomy divested of physiological details and stripped of fanciful hypotheses. His method of description and arrangement is that on which nearly all anatomical works written since have been modelled. Some have described the appearance of his work as a beginning of a new era in anatomical progress.

The end of the last century and the beginning of this was rich in anatomists of repute, men who did much to make anatomy a science. Such men are Monro, Cheselden, Douglas, John and Wm. Hunter, Cruikshank, Camper, Bell, Zinn, Meckel, Scarpa, Blumenbach, Cuvier, Haller, Buffon, Dumas, Lamarc, and others of lesser note.

From the first quarter of the 19th century up to the present time the march of progress has been steady. Anatomy has become more philosophic, and the methods of teaching and investigation have become more scientific. Human anatomy is now regarded as forming a small, but important, part of one

majestic whole. Many men are now laboring where few were formerly found, and laboring, too, with the advantage of all modern methods of research and the great light which has been thrown on the science by their predecessors.

In schools where formerly one subject was dissected in two years, hundreds are used for anatomical purposes, and the whole field is open to the humblest worker. As much information may be (I don't say is) obtained from one subject, owing to modern methods of preservation and injection, as would formeriy be obtained from a dozen. The student of to-day has many advantages which were denied a century or two ago to even the most renowned. Formerly it was a red-letter day when a subject was obtained, and it was dissected and demonstrated by men of reputation to a select few, who greatly prized the long sought-for opportunity, and considered themselves to be among the fortunate to be so favored. In Italy, in former times, one subject a year, who must have suffered the death penalty, was allowed to each school. The difficulty of securing bodies for dissection was great, even as late as the 17th century. Cortesius, a professor of anatomy at Bologna, could not finish a work on Practical Anatomy he had begun, because of the scarcity of subjects; he had only two opportunities in twenty-four years of dissecting human bodies, "whereas," he says, "I expected to have done so once every year, according to the custom of the famous academies of Italy."

Besides being the basis of a sound medical education, anatomy has other claims of a much broader character; if we study it in the light of our present knowledge, it not only enables us to cultivate scientific habits of thought, but opens up for us fresh fields of inquiry, and puts us in the way of at least partially solving many problems concerning the origin of man and the line of his descent. Thus have morphology and development added a new interest to a subject which was once considered dry and, perhaps, somewhat disagreeable. It is a great mistake to suppose that human anatomy is a subject which has reached its finality; a knowledge of what has been done of late years easily proves this. A few years only have passed since the topography of the cerebral convolutions has been fully described and the origin of

the optic nerve traced to the medulla. The position of the internal organs has only quite recently been accurately determined by means of frozen sections of the body, first introduced by the Russian surgeon Piragoff. In fact, every day anatomists are, by their discoveries, placing new problems before the physiologists to solve. "Every year," says Turner, "adds to our knowledge of form and structure and the relations they bear to function, and fresh light is being continually thrown on the mechanism of the human frame." Human anatomy, without the assistance of comparative, cannot be properly studied; the ideas of an anatomist who only knows the human body are as narrow as those of an explorer of a large river who is satisfied with investigating one of its tributaries, or of a botanist who is acquainted with only one order of plants. His range of knowledge being limited, his ideas must be necessarily so; besides, to the pure human anatomist, much interest in the study of his subject is lost, and the explanation of the existence of rudimentary organs, variations, and anomalies is not attempted or even thought of. Anatomy, however, studied in the light of modern science, teaches not only what we have been, and are, but also indicates, faintly perhaps, what the distant future has in store for us.

ANEURISM OF THE CEREBRAL ARTERIES.*

By WILLIAM OSLER, M.D., F.R.C.P., Lond.

Aneurisms of the branches of the circle of Willis play an important part in the history of cerebral hemorrhage, ranking next to miliary aneurisms of the nutritive arteries. They are certainly more common than the statements of text-books would indicate, and unless a careful dissection is made they are very readily overlooked. Abstracts of ten cases are appended, nearly all of which occurred at the General Hospital, Montreal. In six, the aneurisms had burst and caused fatal hemorrhage; in four, they were found accidentally, and had not produced any symptoms.

The patients were young or middle-aged individuals. One was a lad of 17; another only 20. In five the age was about

* Read before the Pathological Society of Philadelphia.

40. The early age at which they occur has been noted by several writers. Thus, of seventy-nine cases collected by Coats,* there were forty-two between the ages of 10 and 40. Seven were males and three females. The arteries involved were: Left internal carotid, *Case I*; right Sylvian, *Cases II* and *V*; left Sylvian, *Cases III, V* and *IX*; basilar, *Cases IV, VII* and *VIII*; and anterior communicating, *Cases VI* and *X*. The aneurisms ranged in size from a small pea to a large cherry. With the exception of *Case IV*, they were sacculated, and communicated with the lumen of the vessel by an orifice smaller than the circumference of the sac. In *Case V*, there were two aneurisms, one on either Sylvian artery. In *Case III*, the aneurism was surrounded by thickened meningeal tissue; in the others the sac was free. In five cases the hemorrhage was meningeal, and the laceration of brain substance was slight. In *Case III* the hemorrhage was altogether into the substance, which, from Coats' account, seems not uncommon. The extravasation was usually basal, and beneath the arachnoid; the amount of blood considerable, except in *Case I*. In *Case X*, the hemorrhage extended along the right optic nerve and appeared as sub-conjunctival ecchymosis.

In *Cases III, VII, VIII* and *IX* there was heart disease; in *Case VIII*, ulcerative endocarditis. In *Cases I, V, VI, VII* and *IX* there were atheromatous changes in the branches of the circle of Willis.

Embolism, endarteritis and atheroma are the chief causes of aneurism, and the cases in this series afford illustration of each. Although it was suggested by Ogle,† Church‡ and others that embolism played an important part in the production of aneurism, the evidence was not very conclusive until the publication of Ponfick's observations in 1873.‖ In several of his cases, the connection of the embolus with the aneurism was very clearly demonstrated. Of the cases here recorded, four were associated with heart disease, but in only one, *Case III*, was

* Glasgow Medical Journal, 1873.

† Medical Times and Gazette, 1866.

‡ St. Bartholomew Hospital Reports. Vol. VI.

‖ Virchow's Archiv, Bd. LVIII.

the condition suggestive of the previous occurrence of embolism. In this patient, a lad of 20, with aortic valve disease, the aneurism projected directly into an oval cyst with reddish-brown contents, and there can be but little doubt that here, on a former occasion, there had been a lesion of the vessel, most probably embolic. Ponfick supposes that this occurs by a weakening of the wall due to direct contact of the embolus. Recently, I have had an opportunity of studying an aneurism of the renal artery which had developed on one of the primary branches, and, indeed, involved to a slight extent the bifurcation. There was ulcerative endocarditis and a large infarct in the lower end of the right kidney, with considerable fibroid change about it. The vessel going to this part was obliterated and fibroid in the great part of its extent, but for one-fourth of an inch from the main division it was dilated and aneurismal. The walls were greyish-red in color, softer than than normal, and the coats could be readily separated. Here the aneurism had developed on the proximal side of the obstruction in consequence, apparently, of interference with the nutrition of the coats of the vessel.

In the other cases associated with heart disease, there did not appear to be any trace of previous embolic lesion in the affected vessels. In five cases there were atheromatous changes in the vessels of the circle of Willis, and I think this process stands in more frequent connection with the formation of these aneurisms. Patchy atheroma, with fatty changes in the intima, is very common in the larger arteries of the brain, and I have met with instances in which the branches of the middle cerebral arteries were chiefly or alone involved. The occurrence of so many of these cases under the age of 40 has been urged in favor of the embolic theory, but atheroma, particularly in isolated foci, may occur in the young. A weak spot in one of the large cerebral vessels would be specially liable to yield, as the pressure in these branches is so directly communicated from the aorta.

In *Case IV,* the dilatation was due to local endarteritis, which was possibly associated with recent syphilis. There was sub-endothelial proliferation, and infiltration of the media with leucocytes.

The clinical history of cases of cerebral aneurism is necessarily

meagre, as they rarely cause symptoms prior to rupture. In five of the six cases in which this took place, death occurred rapidly. In *Case I* the hemorrhage was small, and the patient lived about six weeks.

Case I—*Aneurism of left internal Carotid.*—Female, aged 53, admitted, under Dr. Geo. Ross, Dec. 24th, with headache and debility. Three days before she had had an epileptiform convulsion, followed by drowsiness, and in the succeeding forty-eight hours there were four other seizures. There was no paralysis, but the chief symptom was a rambling delirium, from which she could be roused, and then would answer intelligently. Urine albuminous. She remained in this state for nearly five weeks. On Jan. 25th the right arm was flaccid. Insensibility supervened, and death, about six weeks after admission. The post-mortem showed atheromatous arteries at the base of the brain, and on the left internal carotid artery, just before its division, a sacculated aneurism the size of a hazel nut, which communicated with the lumen of the vessel by an orifice 1 by 1½ lines in diameter. The sac contained a firm decolorized clot. In the course of the middle cerebral artery there was recently effused blood, beneath which the brain substance was lacerated to a slight extent. There was an atheromatous patch in the anterior segment of the mitral valve ; otherwise the heart was healthy.

Case II—*Aneurism of right middle Cerebral Artery.*—Mrs. R., aged 40, married, five children, patient of Dr. John Bell, was found speechless in her bed on May 29th. She had been a healthy woman, but had suffered with vertigo, and of late her memory had failed. There was left-sided hemiplegia, gradually deepening insensibility, and death occurred on the night of the 30th. At the autopsy, slight meningeal hemorrhage was found at base and over convolutions of right side. The right Sylvian fissure contained a large clot, and the convolutions bounding it were considerably lacerated. At the main bifurcation of the right middle cerebral artery was an aneurism the size of a bean, about half an inch in length and a quarter of an inch in breadth. At its under surface was a rupture with a ragged orifice. There was no atheromatous change in the vessels at the base. No heart disease.

Case III—*Aneurism of left middle Cerebral Artery.*—A. R., aged 20, a small, but well-built young man, died suddenly on the evening of the 25th of March, and the body was brought to hospital. No history could be obtained of any previous illness. Brain, on section, presented a large clot on the left side, which involved the lenticular nucleus, internal capsule and part of thalanus, and reached almost to the convolutions of the insula. On carefully tracing the vessels in the left Sylvian fissure, one of the vessels was closely adherent in the angle between the insula and the parietal convolutions. The artery appeared to enter an oval mass the size of a large cherry, which, internally, was in direct contact with the clot, and on slitting up the vessel it expanded into a small aneurism the size of a pea, which occupied about one-third of the oval mass above referred to. The wall of the aneurism presented a rupture 4 millimetres in length. The chief part of the oval mass was made up of a cyst with firm walls and reddish-brown, pulpy contents. No communication existed between this and the aneurism, but at one point the connection of the aneurism and the cyst was very rough and fibrous. A branch was given off just below the aneurism, which looked as if it had been formed at the fork of a vessel. Arteries of the circle of Willis were not atheromatous. Heart hypertrophied; fusion of two of the aortic cusps; no vegetations.

Case IV—*Aneurismal dilatation of left vertebral and first part of basilar arteries. Endarteritis.*—James B., aged 36, found dead in his bed. Eighteen months before had had secondary syphilis. Extensive coagulum at base of brain from optic commisure to medulla, and extending along the vessels into the fissures and fills the 4th ventricle. The left vertebral and first portion of the basilar much dilated, and in the latter vessel, close to its origin, there was a shallow dilatation, with a small perforation in the centre. The intima was smooth, but in places presented opaque atheromatous areas, which, about the centre of the basilar, very materially reduced the lumen. The carotids and Sylvian vessels normal. Heart healthy. No other regions of arterial disease.

CASE V—*Aneurisms of right and of left middle Cerebral Arteries.*—Male, aged 55. Patient of Dr. Arthur A. Browne. Ill for eighteen months with obscure brain symptoms. Vessels at the base very atheromatous, and just beyond the first division of the left middle cerebral there was a sacculated aneurism the size of a pea. It had not ruptured. On one of the main branches of the right middle cerebral artery there was a second small irregular dilation. In left hemisphere there was an old apoplectic cyst, in the vicinity of which were numerous miliary aneurisms. No valvular disease of heart.

CASE VI—*Aneurism of anterior communicating artery.*—Mrs. G., aged 40, died suddenly in a shop, and was brought to the General Hospital. No history of previous illness. Clots in region of longitudinal fissure, and a uniform sheeting at the base from olfactory bulbs to cord, entirely beneath the arachnoid. One or two spots of atheroma on basilar and middle cerebral branches. Careful dissection of the circle of Willis revealed a small aneurismal pouch projecting from the anterior communicating artery, and on its under surface a slit-like rupture 1.5 millimetres in length. The sac was smooth-walled, very thin, and presented a spot of atheroma near the orifice. Heart normal. Aorta atheromatous. Kidneys a little granular.

CASE VII—*Aneurism of Basilar Artery.*—J. S., old man, over 75 years of age. Death from thrombotic softening in left hemisphere of brain. Vessels at the base atheromatous. An aneurism the size of a large pea was connected with the basilar artery, and lay imbedded in a shallow fossa in the pons. The walls were thick, and did not contain thrombi. Heart hypertrophied. Aortic valves incompetent. Pericardium adherent.

CASE VIII—*Aneurism of Basilar Artery.*—M. W., male, aged 43. Had had syphilis. Admitted with pneumonia, and developed ulcerative endocarditis. An aneurism 6 by 5 millimetres projected from the upper wall of the basilar artery, about its centre, and had formed a bed for itself in the pons. It did not contain clots. Branches of circle of Willis not atheromatous. Heart a little hypertrophied. Recent ulcerations on aortic and mitral valves.

Case IX—*Aneurism of left middle Cerebral Artery.*—Female, aged 40. Died of pneumonia. Vessels of circle of Willis slightly atheromatous. A patch in the basilar narrowed its lumen considerably. Just before the first bifurcation of the left Sylvian artery there was a sacculated aneurism the size of a pea. The wall of vessel about it not atheromatous; no clots in interior. Heart hypertrophied; vegetations on aortic valves.

Case X—*Aneurism of anterior communicating artery.*—G. E., a lad of 17 years, admitted Dec 18th in an insensible condition. Thre months previously had an epileptic fit, from which he quickly recovered. For eight days past has had severe headache. He remained unconscious and died on the 23rd. Ecchymosis of right upper eyelid and conjunctiva developed while under observation. Extensive hemorrhage at base of brain, involving meninges and extending along the anterior cerebral arteries upon the corpus callosum. On separating the orbital plates of the frontal lobes, and carefully removing the clots, an aneurism (measuring 10 by 11 millimetres) was seen occupying the longitudinal fissure. It was partially imbedded in the adjacent brain tissue, which was a little lacerated. On dissection, it was found to spring from the anterior communicating artery by a very small orifice situated close to the right anterior cerebral. The sac was full of dark blood, walls very thin, and presented a rent of 2 mm. in extent at the lower part. Other vessels of the brain healthy. No heart disease.

Our knowledge of the subject of cerebral aneurism may be thus summarized:—

1. The rupture of aneurisms of the larger arteries is a frequent cause of cerebral hemorrhage in persons under forty years of age; in the experience of some pathologists, the most common cause.

2. The hemorrhage is usually extensive, and may be exclusively meningeal or mainly into the brain substance and ventricles. (*Coats.*)

3. The aneurisms are caused in a few cases by embolism, in a large number by atheroma and fatty change, and occasionally by acute endarteritis.

QUARTERLY RETROSPECT OF SURGERY.

By FRANCIS J. SHEPHERD, M.D., C.M., M.R.C.S, Eng.,
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Supra-pubic Lithotomy.—This old operation which was discarded in favor of the lateral on account of its high mortality has, within quite a recent period, been successfully revived. It has been extensively practised by the most eminent surgeons of Germany, Austria, Holland and America; and even that most conservative of surgeons, Sir Henry Thompson, although he had been previously opposed to it, is now its strongest advocate. Sir Henry says (*Lancet*, Dec. 5th, 1885): "It is my belief that in the hands of most operating surgeons this proceeding (the supra-pubic operation) will prove a safer and far easier one than lithotrity, with all its advantages, for hard stones when they have arrived at a weight of about $1\frac{1}{2}$ or 2 oz."

This operation is easy of performance and free from many of the dangers which accompany the lateral—such as hemorrhage, wound of rectum, and injury to the neck of bladder if the stone be large. The great objections heretofore to the supra-pubic operation have been the danger of urinary infiltration of the cellular tissue about the neck of the bladder and the risk of wounding the peritoneum. The first danger may almost certainly be avoided if proper antiseptic precautions be taken, and the second need only occur in those rare cases where the peritoneum reaches down between the bladder and symphysis pubis. Even this danger is avoided by making use of Petersen's method of pushing up an already distended bladder by means of a pear-shaped rubber bag introduced into the rectum and then distended with water. In this way a considerable supra-pubic space is obtained free from peritoneum, and the viscus being supported below, manipulation of its interior is more easy. Sir Henry Thompson's plan is first to push up the bladder by means of Petersen's bag and then inject the bladder itself with six or eight ounces of a mild antiseptic solution; carbolic acid 1–1000 is the one used by him, but other weak solutions, as bichloride, boroglyceride, or boracic acid, would answer as well. After the injecting catheter is removed, the penis is firmly ligatured with

indiarubber tubing. An incision about three inches long is made in median line down to the symphysis pubis, and when the transversalis fascia has been reached and cut through, the yellow fat in front of the bladder is seen, and now the finger-nail should be used to clear the tissue over the bladder and thus avoid wounding the veins; when the bladder is reached, it is pulled up by a sharp hook which should enter the viscus, and then an incision is made large enough to admit the forefinger to feel for stone; if very large, the incision in bladder should be increased by gently tearing the parts, and the stone extracted with the two forefingers or forceps. Sir Henry, after the stone has been extracted, leaves the wound open, and for 24 to 48 hours keeps in a large drainage-tube; a soft, full sized catheter is also introduced into the bladder. Out of ten operations in favorable cases performed by Sir Henry, he has had only one death. He thinks the supra-pubic operation eminently suitable for the removal of tumors; in these cases the wound in the bladder should be kept open by passing two stout silk ligatures through the margins.

The method of after-treatment above described is not the only one which is advocated. Recently a number of cases have been reported where the wound in the bladder has been closed immediately by sutures, as also the incision in the abdominal walls. Von Bruns was the first surgeon to suture the bladder after lithotomy; this he did successfully in two cases in 1857-58. (Editorial *Medical News*, Sept. 12, 1885.) Both cases were in children. Suturing the bladder separately should only be done in suitable cases; if primary union cannot be obtained, owing to position of bladder or condition of parts, it is, of course, useless.

Dr. Géza advocates (*Langenbeck's Archiv*, Bd. XXXII, Hft. 2, 1885) first excising an elliptical portion of the bladder down the mucous membrane, a little larger than the required incision, then incising the mucous membrane and sewing up the bladder with antiseptic silk sutures. The mucous membrane is not included in the sutures.

Dr. Starr (*Amer. Jour. Med. Sciences*, July 1877) reported a successful case, in which he included the abdominal wall and bladder in the same suture. Each stitch passed through one

side of abdominal wound, included a part of bladder wall on one side of bladder wound, and then crossed the wound and included a similar portion of bladder wall on other side, and finally passed through the abdominal wall to surface. When the sutures were tightened, the bladder wall was slightly inverted, and the edges of wound in abdominal walls brought close together.

Dr. L. S. Pilcher of Brooklyn (*Annals of Surgery*, Feb. 1886, p. 171) reported a successful case to the New York Surgical Society of supra-pubic lithotomy with suture of bladder wound. In this case he made an oblique incision into bladder wall, and after removing the stone, closed the wound by eight fine silk sutures passing through only the muscular and submucous layers of the viscus. The external wound was brought together with catgut sutures and harelip pins, and dressed with iodoform and cotton wool. The man went home well on the eleventh day, primary union having everywhere taken place.

At a meeting of the Royal Medical and Chirurgical Society of London, March 30th, 1886 (*Brit. Med. Journal*, April 3), Mr. Richard Barwell read a paper on *Supra-pubic Lithotomy*. The author pointed out a not unfrequent sequela of urethro- or vesico-vaginal lithotomy is an intractable form of vesico-vaginal fistula, and that the supra-pubic operation altogether prevented this. He related the case of a young girl aged 9, from whom he had removed a large stone successfully by the supra-pubic method. The wound closed in two weeks. Also the case of a man aged 60, in whom a similar operation had, with the best results, been performed. The bladder was sutured in both cases. No rectal bag was used. The fluid employed was boro-glyceride. He held that distension of the rectum had very little influence on the anterior fold of the peritoneum, and that injection of the bladder would always raise it high enough.

At the same meeting, Mr. Walter Rivington related the case of a man, aged 61, who had an encysted calculus, which was removed by the supra-pubic method. It could not be extracted with the forceps. Lithotrites were useless, so the stone was broken with hammer and chisel, and extracted piecemeal; weight of fragments, 23 ozs. After extraction, the wound in the bladder and in the soft parts were separately sutured. The patient

rallied well from the operation, and at end of three months was well. He, about this time, had an attack of cystitis, and death ensued. Suppurative nephritis of left kidney was found, with cystitis of the bladder. Although this calculus is not the largest removed from a human bladder during life, it appears to be the largest removed during life with recovery of patient from the immediate effects of the operation.

Mr. W. H. A. Jacobson also reported a case of supra-pubic lithotomy in a young man, aged 19, from whom a large stone was removed. No sutures in bladder or drainage-tube in the wound, or catheter in the bladder, were made use of. He first passed urine per urethram on the 23rd day.

In the discussion which followed the reading of these papers, Sir Henry Thompson said that foreign surgeons agreed with English surgeons in saying that the surgeon with little experience or skill had better use a cutting operation, and the best for him was a supra-pubic lithotomy, with some of the modern improvements. He said that the exact position of the anterior peritoneal fold was of little importance, although he believed, notwithstanding what Mr. Barwell had said, that the rectal bag was valuable, not only from the fact, as Bouley strongly contended, that the supra-pubic interval was increased, but from the fact that it made the bladder firm under the finger, and brought it up from the pelvis into the abdomen. Hildanus, in the 17th century, had shown how it was possible to push up the stone above the margin of the pubes in children by pressure inside the rectum. The distension of the rectum was most valuable in the removal of large tumors of the bladder by the supra-pubic method. There was less hemorrhage; he had only to tie one vessel in nine operations, and eight of the patients were still alive.

Mr. Cadge of Norwich said he wished to throw in a word of caution in this matter against a too enthusiastic recommendation of the supra-pubic operation. At the time of Cheselden and Douglas, men were eagerly in favor of it. Afterwards it was coldly neglected. Experience was too limited at present to justify surgeons in proposing to abandon the lateral operation. About a dozen cases had been referred to that evening, with two deaths. He thought, at least, ten of these cases could have

been dealt with by the lateral operation, and Mr. Creighton of Dundee had shown that stones weighing from 4 ozs. to 8 ozs. might be successsfully dealt with by the old operation. A dozen operations with one death! Martineau of Norwich had done 84 lateral lithotomies, with two deaths. He agreed with Mr. Barwell in saying that distension of the rectum was not of much use in raising the pre-vesical fold of peritoneum, but that it was mainly useful in raising the fundus of the bladder, which it could do even as much as two inches. The absence of hemorrhage was another quoted advantage of the high operation, but in the dozen or so of cases reported that evening there had been three with decided hemorrhages. If the rectal bag were injected as full as Petersen advises (22 ozs.), there was danger of rupturing the rectum, as happened in one of his own cases.

Both Mr. Chas. Stewart and Mr. Bryant stated that they had tested the effect of the distension of the rectum on the position of the bladder, on the dead subject, and their experiments agreed with Dr. Garson's. There was no doubt more bladder surface was exposed above the pubes by distending the rectum.

Mr. Lund urged that in the lateral operation, the danger arising from bruising the tissues made them unfavorable for healing; there was no bruising in the supra-pubic method. The use of anæsthetics, he believed, was one reason why the operation might now be regarded with more favor than it was during the last century.

Dr. Orlowski of Warsaw reports (*Deut. Zeitschr. f. Chir.*, Dec. 1885) three cases of supra-pubic lithotomy, with one death in a very debilitated old man. The author encountered a case in which the pre-vesical fold of peritoneum reached down as far as the pubic symphysis, and in consequence he insists on using a grooved dircctor when incising the abdomen. He advocates the use of silk thread passed through the muscular walls of the bladder instead of hooks or retractors. He advises the immediate suture of the bladder, which mode of treatment, he says, shortens the after-treatment by ten days.

Lithotomy at German Surgical Congress.—At the recent meeting of the German Surgical Congress, held at Berlin April 7th, lithotomy was discussed. The discussion was opened by

Kœnig (Göttingen), who said that in his experience median lithotomy was the safest and easiest, and the wound healed more rapidly than by any other method. His experience with the hypogastric method was small, but unfavorable. Out of five cases of supra-pubic lithotomy he had lost four ; three of these died of pelvic cellulitis. According to Merewin, of 147 median lithotomies only 9 died, whilst Garcia, in 94 cases of the supra-pubic, noted a mortality of 24 per cent. ; 5 cases died of pelvic cellulitis. Tuffier, in 120 cases treated by this method, gives a mortality of 27 per cent. Kœnig's conclusions are that for small stones the median perineal operation is the best, and that the supra-pubic method, although it exposes the patient to the risk of urinary infiltration, gives easy access to the bladder, and the extraction of large stones and foreign bodies can be easily effected by it. After the median perineal operation, he always plugs the wound with iodoform gauze, which was removed when saturated, and the wound and bladder washed out.

Ebermann (St. Petersburg) thought that for most stones the median perineal was the best. In cases of encysted calculi and enlarged prostate, he preferred the supra-pubic ; he looked upon lateral lithotomy as a superfluous method. With regard to lithotrity, it furnished the best results (in the speaker's own cases a mortality of 1 in 12), but required much practice. It should not be performed without rendering the bladder aseptic. It was contraindicated in paralysis of the bladder, or when that organ was very irritable, or when stricture of the urethra existed. Where there was old suppurative disease of the bladder, or a renal lesion, he preferred lithotomy.

Bergmann (Berlin) defended the supra-pubic operation, and held that it was not so dangerous as stated. In a general way he agreed with Kœnig. The great advantage of the supra-pubic method was that the bladder could be surely emptied of calculi. He did not think cellulitis followed this operation as often as it did the median perineal. Cellulitis could be avoided in the supra-pubic operation by the immediate closure of the bladder by Lembert's suture and by the employment of iodoform gauze dressings. In most of his cases the bladder united by first intention, and in a few the urine flowed for a day or two. He was

in the habit of closing the upper end of the abdominal wound and dressing it with iodoform gauze, leaving the lower end open, so that if cellulitis occurred it would be localized. He preferred the supra-pubic method in all cases complicated with renal affection.

Trendenlenburg (Bonn) did not suture the bladder, but introduced a drainage-tube, and for the first few days made the patient rest on the side ; by this proceeding he had obtained the best results.

Volkmann (Halle) said that he had had only two deaths in a hundred cases of lithotomy by the median perineal method ; he preferred this method because the prostate was not injured, and he had extracted in this way stones of large size. The supra-pubic method he considered more dangerous than ovariotomy. If the stone is large, he crushes it in the bladder, through the perineal wound. The supra-pubic method should be employed only where the stone is very large.

Schède (Hamburg) also practised the median perineal operation. He was in the habit of suturing the cut edge of the urethra to the skin and so avoided hemorrhage. He also introduced a tube the size of his thumb into the bladder, and for the first eight days washed out the bladder with boracic solution. Lithotrity often left fragments in the bladder.

Fuersteinham (Berlin) and Shönborn (Königsberg) defended the operation of lithotrity, and held that when it was badly performed it was dangerous, but in the hands of skilful and experienced men was the best operation.

Sonnenburg (Berlin), encouraged by the success of Bergmann, Trendelenburg and Dittel, had practiced the supra-pubic method with the best results, even in very obese individuals. He alluded to two supra-pubic operations where a fistulous opening resulted. He thought these cases of fistulous openings resulted from an adherence between the bladder and the walls of the abdomen. Once he had wounded the peritoneum in a case where it had reached and was adherent to the symphysis pubis. The patient recovered.

Israël (Berlin), in one case, had seen this anomalous arrange-

ment of the peritoneum. When a fistulous opening resulted from the supra-pubic operation, it required very energetic measures to close it. In one case he had resected the whole cicatricial tissue and applied a new kind of suture. He had employed Ebermann's method of suturing the cut edge of the bladder to the abdominal wound with good results as to preventing the occurrence of cellulitis.

Gussenbauer (Prague) said he preferred lithotrity to lithotomy, except in those cases where the stone completely filled the bladder, the bladder was injured, or the kidneys were diseased. The perineal operation was very well when the stone was small, and he always had recourse to it when operating on children. When it was necessary to crush the stone, he preferred the lateral operation. He only employed the supra-pubic operation when the stone completely filled the bladder. He has had two such cases. In one, the peritoneum came down to the pubis and it was wounded ; the patient, who was suffering from pyelo-nephritis, died of acute peritonitis. In the other case, the stone was so large that he had to detach the origin of the two recti muscles in order to extract it ; the patient recovered. In fat subjects, he thought the supra-pubic operation should not be performed. After the median perineal operation, he always plugged the wound with gauze, and did not introduce a tube, which irritated the bladder, but preferred to catheterize the patient for a short time after the operation.

Kuester (Berlin) said that perineal section was sometimes not sufficient. When the prostate was enlarged, the bladder could not be thoroughly explored. On these occasions he had to resort to the supra-pubic method, after having failed to complete the operation by the perineal incision. It was not always possible to dilate the prostatic urethra without tearing the parts. In two cases he had torn the prostate and caused the death of the patients.

Petersen (Kiel) thought that relapses after lithotomy were not always due to the manner of performing the operation, for very often they are caused by a new descent of stones from the kidney. He could not understand why his method of distending the rectum was not accepted. It was not necessary to wound

the peritoneum when his method was not employed, but by it the operation was greatly facilitated. Fistulæ following the operation were caused by a too rapid healing of the abdominal wound before closure of the bladder incision. The external wound should be kept open till the bladder wound was closed. The discussion had convinced him that, contrary to his previous views, there were cases where it was necessary to perform lithotrity.—(Condensed from *La Semaine Médicale*, April 21st and 27th.)

This discussion seems to prove that, in Germany at any rate, lithotrity has been to a great extent abandoned for median perineal lithotomy, and also that the supra-pubic operation is yet on its trial, and only employed for very large stones and in those cases of hypertrophied prostate where perineal section has failed. This discussion will be a surprise to most English and American surgeons, among whom the idea is growing that lithotomy has had its day and lithotrity is the operation of the future, with, perhaps, occasional supra-pubic lithotomy for large hard stones. Much more light is needed before a proper conclusion is arrived at. It is certainly significant that so many German surgeons of such immense experience should be so strongly in favor of median lithotomy.

Simple Fracture of the Patella.—The treatment of this fracture is still a subject for discussion among surgeons. Some advocate wiring the fragments, others prefer using apparatus. In considering the treatment of this injury, which does not always come under the care of the pure surgeon, but is often treated by the general practitioner, that method ought to be advocated which is the least dangerous as regards the life of the patient. Now any medical man is capable of treating fracture of the patella successfully by plaster or other splints, but only a few can with impunity cut into a knee-joint and suture the fragments without risk to the patient, and even these few, who must be men of large experience in modern surgery, have their failures. Certainly by suturing we get bony union, but is this much to be preferred to the close fibrous union obtained by other methods without the patient running any risk of his life. I have seen cases of fracture of the patella, where suture of the fragments has

been resorted to by very able surgeons, and yet suppuration has taken place and the joint been destroyed. It certainly appears to me wiser to advocate the safer plan, and one suited to men of even limited surgical experience. I know that if it ever happened that I should be unfortunate enough to break my patella, I should decline to have the fragments sutured, but should prefer Heath's treatment by aspiration, if necessary, and the immediate application of plaster-of-paris bandages. This is the method that I myself have employed during the past two years with very good results. In my opinion, wiring the fragments is only justifiable in cases of compound fracture of the patella.

At the meeting of the New York County Medical Association, held October 19th, 1885, Dr. Fred. S. Dennis read a paper on "*Fracture of the Patella, with illustrative cases*" (*Med. News*, Oct. 31, '85). The paper was devoted to the treatment of this accident by wiring together the fragments. He stated that previous to 1883 two cases out of 49 treated by this method had terminated fatally, while in 6, suppuration and ankylosis had followed the operation. Since 1883 a great number of cases had been treated by wiring the fragment, without, as far as the author knew, a single death and with but three cases of suppuration. Dr. Dennis stated that personally he had treated some 60 cases of fracture of the patella, and that previous to adopting the wiring he had obtained the best results from the method of the late Dr. James Little with plaster-of-paris. With the new operation, bony union is the rule. The advantages of operation are: 1. Absence of danger to life and limb. 2. The superior results as regards the function of the limb and the joint. 3. The greater rapidity of repair. In one case amputation had been necessary because erysipelas had been contracted. He had had one death following wiring of the patella, but in his opinion the operation had nothing to do with the result. At the autopsy (six days after) the joint was found aseptic. Death was due to delirium tremens and Bright's disease. There was firm bony union in this case. After describing this operation in detail, he ended with the following conclusions:—

1. In compound fracture of the patella, there is not the slightest doubt of the propriety of the operation.

2. In recent and old fractures, under ordinary circumstances and with the patient's consent, it is wholly justifiable.

3. In debilitated patients and those suffering from organic diseases, the operation should not be performed.

4. It is not an operation which can be indiscriminately performed. It should never be undertaken by the inexperienced or by those who have not the most complete faith in the efficacy of antiseptic surgery.

5. Success depends on the most thorough carrying out of the minutest details of antiseptic procedure.

Dr. Dennis exhibited a number of interesting cases after the reading of the paper.

Robt. L. Swan (Dublin), in a letter to the *Brit. Med. Jour.*, Jan. 9th, 1886, gives the following description of his method of treating transverse fracture of the patella:—"An Esmarch's bandage having been applied to the limb, a vertical incision four inches in length is made, commencing one inch above the base of the patella, through skin and fascia, down to the tendon. The coverings having been reflected, a transverse incision is made through the tendon, carefully avoiding its posterior investment at the centre of the incision, or three inches above the patellary base. The anterior fibres of the vasti, which are found to act on the aponeurotic bands, which cause the upper fragment to revolve on its own axis and thus produce gaping at the site of the fracture, are now divided as much as may be necessary. The fragment is then found to lie evenly in its position. Strict antiseptic precautions, physiological pressure, and avoiding the disturbance of the reparative processes, ensure a speedy healing of the wound."

Mr. Walter Rivington, in the *Lancet* of Jan. 24th, 1885, reports a case of transverse fracture of the patella in which he aspirated the joint and then attempted to approximate the fragments with Malgaigne's hooks inserted into strappings of gutta percha. Soon, however, pus was oozing out where he tapped the joint, so he cut down, washed out the joint, and sutured the patella. Result was bony union, but very little movement.

In the *Annals of Surgery* for September, 1885, Dr. Geo. B. Fowler reports a case of compound comminuted fracture of the

patella in which he used wire sutures. There was necrosis of upper fragment, which was removed. The patient recovered with a useful limb.

Suture of Patella with Catgut.—Dr. Stimson showed the New York Surgical Society, Jan. 26th, 1886, a patella which he had occasion to divide in an operation of excision of knee. The patella was sutured with catgut. Subsequently he removed the patella, which was so thoroughly united that the line of union could not be seen.

Antiseptic Irrigation of the Knee-Joint for Chronic Serous Synovitis.—Dr. Robt. F. Weir published a paper on the above subject in the *New York Medical Journal* for Feb. 20th, 1886. He says that though the treatment of chronic synovitis by evacuating the joint of its excessive secretion and washing it out with a carbolic acid solution has been known to many surgeons since Schede wrote on the subject in 1875, yet it has not been appreciated and practiced by surgeons as it should. Its merit has been largely tested in Germany and Austria. Rinne's conclusions are " that puncture and washing out of a joint with a three or five per cent. solution of carbolic acid is to be recommended in—1, Subacute or chronic synovitis after failure of the usual treatment. 2, In undoubted hydrops articuli. 3, In threatening pyarthrosis from any cause. 4, In certain obstinate cases of gouty synovitis." Dr. Weir, from his own experience, is convinced of the value of this method of treatment in chronic serous synovitis, and thinks it a plan which can be applied, not only to the so-called hydrops articuli, but also to the lingering effusions that remain so often obstinate to the use of rest, elastic and other pressure, and counter-irritants from iodine to the Paquelin cautery. The puncture is made at the inner or outer side of the upper synovial pouch, after it has been rendered more tense by pressure from the opposite side. If this pressure is carefully managed, not only at this stage, but also during each evacuation of the joint, being gradually removed while the joint is filling up with the carbolic solution, there will be no entrance of air into the articulation. A rather large-sized, carefully disinfected, ordinary trocar and canula is chosen to avoid tho plugging of its lumen by the lymph flocculi. After the joint is

evacuated of its fluid, a 1 to 20 warm solution of carbolic acid is allowed to flow from a fountain syringe through the cannula till the joint is distended, when the nozzle of the syringe is removed and the solution permitted to escape from the joint; this should be repeated several times till the fluid comes out clear. The joint is finally emptied, and while pressure is firmly made the cannula is withdrawn with a jerk and the knee enveloped in sublimate gauze dusted over with iodoform, over this absorbent cotton, and the whole bandaged and then immobilizod with a plaster-of-paris splint." This treatment is attended by but slight reaction and the best results. Dr. Weir narrates seven cases to show the value of this treatment, and concludes by saying that Volkmann has been able to effect a cure and save the limb by repeating these injections three or four times at intervals of several weeks.

Surgical Treatment of Peri-typhlitic Abscess.—Dr. Wm. T. Bull (*New York Med. Record*, March 6th, 1886) reports a most interesting series of cases of peri-typhlitic abscess, where he had cut down (in some cases 48 hours after the symptoms became acute) and opened the abscess to the great relief and safety of the patient. In these cases Dr. Bull advocates early exploration with a long needle attached to a very tight syringe. In one case, where no pus was found by thrusting a 3-inch needle directly backwards into the iliac fossa, by using a longer needle and pushing it from a point above and behind the anterior superior spine toward the middle of the fossa to the depth of four inches offensive and bloody pus was met with. An incision was made above and to the outer side of the middle of Poupart's ligament, and about an ounce of fœtid pus evacuated. Six weeks after a calculus was removed from the bottom of the sinus with forceps. In this case the operation was performed within 48 hours of the onset of the acute symptoms. The author goes on to say that in peri-typhlitis the general symptoms and local conditions may furnish valuable indications of the presence of pus, but thorough exploration with the needle is the best means of diagnosis. He strongly insists on opening these abscesses early, as soon as pus can be got by needle exploration. For even when the abscess opens into the bowel it is still apt to burrow, and if

it does not eventually cause the death of the patient, leaves sinuses which last for months. No time can be fixed for opening these abscesses. We must be guided entirely by the evidence afforded by needle exploration. The author states that the results of Dr. Noyes' investigation of 100 cases treated by incision 85 per cent. recovered, a mortality of 15 per cent; in the 67 cases collected by the author in 1872, when no early operation was performed, the mortality was 47 per cent.

Dr. Bull's paper is a very valuable one, and especially directs the attention of medical men to the importance of looking for the formation of pus in these cases, and not waiting till it either comes to the surface or bursts into the peritoneum, and shows conclusively the great benefit, as regards the life of the patient, of evacuating these abscesses at the earliest possible period.

I can recollect seeing not a few cases in the post-mortem room which, if they had been treated in the manner described by Dr. Bull, would, perhaps, still have been fulfilling their earthly duties. In one remarkable case reported to the Montreal Medico-Chirurgical Society some years ago, the pus had burrowed upwards, had perforated the diaphragm, and filled one of the pleural cavities. The importance of early and frequent needle exploration in cases, where the general symptoms and local conditions indicate the formation of pus, cannot be too often and too strongly insisted on.

Digital Divulsion for Pyloric Stenosis.—(Lorcta's operation, see Retrospect for March, 1885.)—In the *Medical News* for January 16th, 1886, is a record of two operations for digital divulsion of the pylorus performed on the same day, July 16th, 1885, in St. Luke's Hospital, New York, by Dr. C. McBurney. Both these operations ended fatally. One, a woman, who had simple stenosis, died of hemorrhage due to laceration of the pylorus. The second case was that of a woman aged 52, who died 30 hours after the operation of suppression of urine. At the post-mortem, the pylorus was found widely dilated, and no rupture of the mucous membrane existed. The stenosis in this case was caused by a large, old ulcer situated posteriorly, and partially cicatrized. The base of the ulcer was adherent to the pancreas, and the edges were much thickened. The pyloric

orifice lay immediately next to the right and upper edge of the ulcer.

Excision of Pylorus for Cancer.—This operation was reported to the Surgical Society of New York by Dr. Sands (*Medical News*, March 20th, 1886). The patient, a man aged 31, suffered from dyspeptic symptoms for the last three years. Tumor felt at pyloric extremity. An incision was made transversely about 3½ inches long, directly over pyloric extremity. After separating peritoneum and enclosing the pylorus between two sets of clamps, the stomach was then cut through. The wound was brought together by seven interrupted silk sutures internally and six Lembert's sutures, four of silk and two of catgut. The operation lasted four hours. Patient gradually sank and died about 36 hours after the operation. Dr. Sands stated that the operation had been performed too late, and was sorry he had not performed Loreta's operation. At the post-mortem, the cancerous infiltration was found to extend beyond the line of section.

Correspondence.

MARBURG, April 24th, 1886.

To the Editors of THE CANADA MEDICAL & SURGICAL JOURNAL.

DEAR SIRS,—In communicating the few following notes, I write, not because they contain anything specially new, but to give a little idea of what is going on in the smaller university towns in Germany; from the greater centres we often hear.

As regards hospital advantages, laboratory accommodations, and strength in the teaching staff, I believe that Marburg's medical advantages compare favorably with those of many large cities. I was perfectly astonished at what I cannot wait to describe—the number, elegance and commodiousness of the various hospitals, laboratories and institutes employed and set apart for the study here of medical science in its various branches.

Through the courteousness of Professor Roser, I have been permitted to attend his surgical klinik for some time back. The building is a fine one of brown sandstone, and is in most respects a very well-appointed institution. On first attending the klinik one is struck by the number of patients daily presenting them-

selves for surgical treatment. Marburg, with its 16,000 inhabitants, and healthy situation, can never supply all those tuberculous joints, those cases of lupus, spinal caries, etc. They come largely, if not mainly, from the agricultural population, who, as is well known, do not live each on his own farm, but are crowded together in little, old villages with narrow, crooked streets. The little clusters of red-tiled roofs in the rich green thals look beautiful, but, truly, " 'tis distance lends enchantment to the view." Stand in these narrow village streets—see the brown stable-dyed water running in the gutters before the doors—see horses, cattle and sheep housed in buildings side by side with the homes of men, women and children—see the compost heaps a few feet only from the front doors of human dwellings—see those houses, the ground floors of which are either literally ground floors, or are placed directly upon the damp, undrained earth ;—think of these villages, and you cease to wonder at the melancholy army with swollen, tuberculous knees, with ruined ankles, with hip-joints that would satisfy the most enthusiastic orthopœdist, at the large number of consumptives in the medical wards, and the prevalence of granular lids in the eye klinik. Another striking feature in the klinik is its discipline ; during operations, perfect stillness reigns, save for the short peremptory commands of the operator, which are obeyed with a quickness and precision that are admirable.

Chloroform is the only anæsthetic used. Prof. Roser claims that they have no accidents here with it. It is nicely administered. A little oval-arched wire frame, large enough to cover lightly mouth and nose, is bent to a handle at one end, and covered inside and out with thin, open gauze ; the chloroform is poured from a narrow, bent tube passing through the cork of the bottle on the outside covering, and at once sinks to the lower ; the lightness and openness of the whole affair insures a good mixture of air, and the consumption of chloroform does not seem to be great. I mention this little instrument because it is so easily made and so much more convenient and manageable than the handkerchief or towel so commonly used.

All vessels are tied with catgut. Instead of sponges, simply small pieces of soft, white gauze are used, such as is employed

for bandages. These are first wrung out of a 1 to 1000 solution of corrosive sublimate. All washing of wounds, opening of abscesses and after-dressing is done with the irrigator or fountain-syringe, containing the standard solution of corrosive sublimate. Carbolic is not employed, except to disinfect instruments; for all other purposes, corrosive sublimate solution of the above-mentioned strength is generally employed. Here we must except old, indolent or foul sores, or cavities that require to be filled with some antiseptic preparation; in these cases, iodoform or iodoformed gauze. The antiseptic dressings of wounds, while being thoroughly effective, are so simple and readily prepared as entirely to remove the objection so often urged against antiseptic surgery, "It is too complicated for private or specially country practice." I therefore take the liberty of being a little minute.

When an operation is to be performed, the limb is thoroughly cleansed, shaved where necessary, sponged over with ether, and then with the sublimate solution. The hands of the surgeon are carefully rinsed in the same, and ligatures and instruments are all in antiseptic fluid. After the operation is over, and all vessels tied, the wound is irrigated with the 1 to 1000 sublimate solution before it is closed, and again afterwards through the drainage-tubes, which are generally very large. The dressings are now applied. Soft, white gauze, called in Canadian stores cheese-cloth or butter-cloth, is the material used for the wet dressing. This is so folded as to make a bandage of 8 to 16 ply, 6 to 8 inches wide, and 2 to 3 feet long, or according to the size of the limb to be dressed. This, having been previously wrung out of a corrosive sublimate solution 1 to 1000, is carefully applied; another of equal size follows, the dressing being carried well above and below the wound, so giving sufficient surface to absorb all discharges. The whole is now enveloped in a 6 to 8 ply square of the so-called "Braun stück"; this consists of the same material as the above, being, however, unbleached and dry. The whole is secured by a broad, light, dry gauze bandage. When the dressing, after three to five days, is removed, it is interesting to observe that the brown gauze outside is still perfectly dry and clean, even if the under-dressings have

been soaked with the red, fresh-looking discharges. One scarcely sees pus here except from freshly-opened abscesses. The recovery of patients from extensive surgical operations without pus, and with little or no elevation of temperature above normal, is rapidly becoming an old story in the history of antiseptic surgery; and yet in the light of the history, as a whole, of such operations as amputations and excisions, we cannot yet fail to admire and to wonder at such results, especially when we consider that these appliances and dressings can be prepared in a few minutes, and applied without the slightest difficulty by any surgeon, as well in country practice as in the hospital.

During the holidays I have had good opportunities of closely observing the daily temperatures after such operations as excision of the elbow, amputations in young and old, removal of large tumors, scraping out tuberculous knee-joints, etc., and I have been delighted to observe the majority of these run through their course to convalescence with practically normal temperature, and seldom have I seen, in the most severe cases, a temperature of over 38°C. (100.4°F.) during the process of recovery. J. H. D.

Reviews and Notices of Books.

Student's Manual of the Disorders of Menstruation.

By John H. Upshur, M.D., Professor of Materia Medica and Therapeutics in the Medical College of Virginia, Richmond, Va. New York: G. P. Putnam's Sons.

The dedication of this little manual to the memory of the author's father we revere and respect, but we are somewhat at a loss to know why a professor of materia medica should choose a subject of this nature for his essay. So far as we can see, it is fairly correct in its teaching, but altogether too prolix and indefinite for a student's manual. It might suit a general practitioner of five or ten years' practice when on a holiday trip or some such condition of ease and irresponsibility. The instruction given to those who have the care of the young "girl of the period" is good regarding dress, exercise, and forced education. The book is full of quotations from works of eminent writers of

the day. There is one, particularly prominent, from that talented but eccentric surgeon, Mr. Lawson Tait. The gist of this is that many young girls, when they have arrived at puberty, exhibit, by gestures and language, such feelings of vague uneasiness that they should be treated as insane—erotomaniacs. Views of this kind may hold good as relating to young women of Virginia, where the enervating influence of so hot a climate leads to such marked indolence in all pursuits. As in Spain, perhaps, the matured female has either to be married or locked up on low diet. But to apply such a doctrine to young women throughout the world at large is not only erroneous, but is an offence to medical men of culture and refinement.

In the chapter on menorrhagia, the author writes concerning the welfare of widows: "They are suddenly cut off from the normal gratification of the sexual appetite, and the strain falls upon the ovaries; the result is menorrhagia. If a specular examination be made, oftentimes the sexual excitement will be both manifest and for a few moments uncontrollable, amounting almost to a complete orgasm." In the next edition we would suggest to the author that he add to the title of the book the words "Or the Widow's Distress." This would be sure to take. In speaking of the treatment of these cases on page 139, the author completely breaks away with lofty sentimentality and gives utterance to advice so ridiculously impracticable, that we do not think any man, on this globe at least, is pure enough to entitle him to assume so angelic a character. Although containing a few surgical inaccuracies, this little volume may be perused with interest by young and middle-aged medical men, and perhaps also by mothers of a large family of interesting young daughters.

Six Lectures upon School Hygiene: Delivered under the auspices of the Massachusetts Emergency and Hygiene Association to Teachers in the Public Schools. Boston: Ginn & Company. 1885.

This is a work which should be read by all who are engaged in the teaching of all kinds of children. The mischievous effects of the teaching of the present day is, unfortunately, not gene-

rally recognized in the quarters whence relief should come. The voice of the profession for many years has been loud in crying for a relief, which is certainly coming, but all too slowly. We believe this work will hasten the time when the great object of education will be properly and universally understood. The lectures are by medical practitioners, each one well qualified by experience and judgment in the subject with which he deals. The first is on "School Hygiene," by Dr. Wells, the President of the Association, under whose auspices the lectures were delivered. The second is on "Heating and Ventilation," by Dr. Draper, Professor of Legal Medicine in the University of Harvard. The third is on "The Use and Care of the Eyes, especially during school years," by Dr. Williams, Assist. Surgeon of the Massachusetts Eye and Ear Infirmary. The fourth is on "Epidemics and Disinfection," by Dr. Shattuck of Boston. The fifth is on "Drainage," by Dr. F. Wells of Boston; and the sixth is on "The Relation of our Public Schools to the Disorders of the Nervous System," by Dr. Folsom, Physician to the Out-patients with Diseases of the Nervous System, Boston City Hospital.

Rome in Winter and the Tuscan Hills in Summer: A contribution to the Climate of Italy.—By DAVID YOUNG, M.C.M.D., &c. London: H. K. Lewis.

This little work will be found a reliable guide to those who wish to possess detailed information on the climate of Rome and its neighborhood. The opening chapter is devoted to the effects of climate on morbid conditions in general. This is followed by a description of the climate of Rome and its effects upon health and disease. The author is convinced that Rome does not deserve the name that it very commonly gets of being the most unhealthy city in Europe. Acute diseases prevail throughout Italy, and particularly in Rome, to a greater extent than they do in England and northern climates generally, while chronic diseases are not nearly so frequent. Bright's disease, diabetes and all those chronic diseases due to degeneration are comparatively rare in Italy. That this difference is not due to a difference in the mode of life is shown by the fact that chronic diseases

are as rare in the rich as they are in the poor. This is one of the most interesting facts brought out by Dr. Young in his work, and in this connection he asks the pertinent question, Is there not a hope that by timely change of air many of those cases of disease due to chronic degenerative changes may not be prevented or arrested ?

Pneumonia and acute malarial affections are the prevailing acute diseases of Rome. The great frequency of the latter is shown from the statistics of the two largest hospitals in the city, two-thirds of the total admissions being due to malarial poisoning. The mortality from this cause is not very great, however. The deaths from typhoid fever in Rome are alleged to be less than in any other capital of Europe, with the exception of London. One of the chief dangers of the Roman climate is that which arises from its great variations of temperature. The changes are very great and very sudden during the spring months. Full directions are given by Dr. Young as to the best way of counteracting the evil effect of these changes. He also enters into detail as to the proper mode of living for strangers, especially for those in search of health. One of the most fruitful sources of trouble is brought on by the imprudence of visitors in walking about all day and thus fatiguing themselves, and easily rendering themselves preys to any atmospheric poison.

The final chapter is devoted to the cases suitable and unsuitable for a Roman climate. The work will be found full of reliable and common-sense information.

A Guide to the Examination of the Nose.—By L. Cresswell Dober, M.D., Lond., Surgeon to the Brighton and Sussex Throat and Ear Dispensary. London: H. K. Lewis.

In this little book, too much space is devoted to the anatomy of the nose and methods of conducting examinations, while symptoms and diagnosis receive but small recognition. The addition of two or three chapters on treatment would commend the production to students and busy practitioners as an elementary text-book.

Nasal Catarrh and Allied Diseases. — By Beverly Robinson, A.M., M.D. (Paris), Clinical Professor of Medicine at the Bellevue Hospital Medical College, New York; Physician to St. John's and Charity Hospitals, &c. New York: Wm. Wood & Co.

This comprehensive work, already familiar to us, is rendered still more acceptable by the addition of five new chapters. Dr. Robinson has introduced many theories of comparatively recent origin explanatory of nasal affections formerly but little understood. The many modern appliances receive fitting notice. The author has succeeded in compiling, in a comparatively small space, much, if not all, one need know of nasal catarrh and allied diseases.

Books and Pamphlets Received.

The Principles and Practice of Surgery. By Frank H. Hamilton, A.M., M.D. Third edition; revised and corrected. New York: Wm. Wood & Co.

On Asthma: its Nature and Treatment. By Horace Dobell, M.D. London: Smith, Elder & Co.

Surgical Diseases of the Kidney. By Henry Morris, A.M., M.B., F.R.C.S. Philadelphia: Lea Brothers & Co.

The Surgical Diseases of Children. By Edmund Owen, M.B., F.R.C.S. Philadelphia: Lea Brothers & Co.

Practical Clinical Lessons on Syphilis and the Genito-Urinary Diseases. By Fessenden N. Otis, M.D. New York: Printed for the author.

Diseases of the Spinal Cord. By Byrom Bramwell, M.D., F.R.C.P. Second edition. New York: Wm. Wood & Co.

Insanity and its Treatment. By G. Fielding Blandford, M.D., Oxon. Third edition. Together with Types of Insanity, by A. McLane Hamilton, M.D. New York: Wm. Wood & Co.

Handbook of Practical Medicine. By Dr. Hermann Eichhorst. Vol. I. New York: Wm. Wood & Co.

The Genuine Works of Hippocrates. Translated from the Greek. By Francis Adams, LL.D. Vol. I. New York: Wm. Wood & Co.

The International Encyclopedia of Surgery. Edited by John Ashurst, Jr., M.D. In six volumes. Vol. VI. New York: William Wood & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, March 19, 1886.

T. G. Roddick, M.D., President, in the Chair.

Excision of the Elbow for Dislocation and Fracture.—Dr. Roddick exhibited a man on whom he had recently performed excision of the right elbow—one of six cases of excision of this joint operated on during the winter session. He wished to show this case just now as the man was about to leave the city. The operation had been performed for dislocation backwards, with fracture of the olecranon, and both radius and ulna, of three months standing. The ordinary straight incision had been employed, and union by first intention had followed. The result was most satisfactory, the man having all the original movements of the joint. The arm was rapidly developing, so that already he could wield his hammer, being a tradesman.

Diseased Testicles.—Dr. Roddick also exhibited two specimens of diseased testicle—one of sarcoma, sent by Dr. Bryson of Port Arthur (no history) ; the other of tubercular disease, which he had that day removed from a young man aged 25. The latter noticed an enlargement of the left testicle about a year ago, which suppurated and burst, and a sinus still remains. The right one began to swell some three months ago, and at the time of admission to hospital was very much enlarged and the seat of extensive suppuration. It was removed, and found to be very much diseased, the entire epididymis being occupied by a large abscess. No history of gonorrhœa or traumatism, but a distant family history of tubercle.

Interstitial and Submucous Myoma.—Dr. Wm. Gardner exhibited the specimen and related the case. The tumor was of the size of a fœtal head. The patient, unmarried, never pregnant, aged 33, had been several years under observation, suffering from severe pain and excessive tenderness of the left iliac region and from profuse menstruation, lasting from eight to fourteen days. On one occasion, three years previous to operation,

menses ceased for several months, and epistaxis became frequent and profuse. For years the patient had begged for operation. This was undertaken a week ago, the intention being to remove the appendages. The left ovary and tube were easily found, and ligatured, but the right appendages could not be found until the incision was extended and the tumor forced out. They were then found on the floor of the pelvis, and so sessile that they could not be ligatured. Under the circumstances, and in view of the fact that removal of the appendages does not always remove the symptoms of myoma, especially pain, it was decided to extirpate both womb and ovaries. Accordingly, a Tait's wire clamp was applied around the cervix, below the ovaries, and screwed up. The tumor was then amputated, and the stump cauterized and swabbed with a solution of perchloride of iron in glycerine, and secured externally at the lower angle of the wound. The patient did well for the first two days, was then very ill for the next two days, with incessant vomiting, rapid pulse (144), moderately high temperature,—flatus, however, passing after first forty-eight hours; at the end of four days all the symptoms suddenly improved, when copious diarrhœa set in. From this time the patient gave no further anxiety. The clamp was removed on the 13th day. Convalescence was interrupted by an attack of cellulitis, from which she recovered perfectly. The catheter was at no time necessary. The case furnishes an exemplification of the fact that when undertaking the removal of the appendages for myoma, the operator may find, when he gets into the abdominal cavity, that he cannot do this, but may have to proceed to hysterectomy. In this case the extra-peritoneal method most in favor with British operators, and so successful in the hands of Keith, was selected, although it must be admitted that the intra-peritoneal method, when perfected, is that which, in the future, will probably give the best results.

Dr. Alloway spoke of having assisted Dr. Gardner, and of the gratifying results obtained by the operation.

Alexander's Operation.—Dr. Alloway read a report of a case of extreme retroflexion, for the cure of which, after all other means had failed, he performed Alexander's operation of short-

ening the round ligaments. (A full account of this case will appear in our next issue.)

Dr. Kennedy remarked that the operation was still on its trial.

Dr. Smith said that Dr. Alloway's diagrams were most instructive and accurate, and that he congratulated Dr. A. on being the first to perform this operation in Canada. It would, however, be interesting to see the effect of future pregnancies upon Dr. A.'s patient.

Dr. Wm. Gardner said he had been present both in consultation and assisting during Dr. Alloway's operation. He looked upon the case as one of the most typical he had recently met with for Alexander's operation. There was not the slightest evidence of pelvic inflammation nor ovarian disease, and still the patient was, and had been for some time, a confirmed invalid, although every other known method of treatment had been adopted for her relief. Dr. G. said, in regard to pessaries in these cases, that increased experience had led him to use them very much less often of late than he had formerly.

The President remarked that he had the pleasure of being present at Dr. Alloway's interesting operation, and that he fully appreciated the difficulty in performing it.

Dr. Trenholme also reported a case of Alexander's operation, and stated that though some time before the profession, it had not yet obtained an unquestioned place in gynæcological surgery. There is still doubt as to the particular class of cases in which it may reasonably be expected to be useful. Further study is needed as to the anatomy of the round ligament. This line of investigation could be helped forward by those who have charge of the dissecting rooms. If the ligament is frequently found to be imperfectly developed, we will then have to see in what class of cases this anomaly exists, for upon this fact will depend the selection of cases. He said it was with this end in view that he now gave the details of a case lately under his care. The history is as follows: The young lady is 26 years of age, slight build, but regularly and well developed, and from earliest appearance of menses has been a sufferer. There are severe pains preced-

ing and following the menstrual flow. Her sufferings are so severe that she is obliged to lie in bed and take sedatives, or resort to hot water fomentations for their relief. The menstrual pains are gradually increasing in severity and duration, so that at present they last for six or seven days. During the flow, and for about a week before the premonitory symptoms of the flow, she enjoys comparative comfort. Upon examination, the uterus was found retroverted and the fundus well down into the hollow of the sacrum. The left ovary was displaced and occupied the pouch of Douglas; it was also tender and slightly enlarged, probably due to chronic inflammation. The right ovary and left Fallopian tube were normal, but there was inflammation of the right Fallopian tube. The uterus was easily replaced, but the prolapsed ovary on the left side and the diseased tube on the right rendered the retention of any form of support a difficult matter. There were no indications of thickening of the tissues from pelvic cellulitis. Under these circumstances he proposed Alexander's operation as a substitute for the more serious one of removal of the ovaries and tubes. The operation was undertaken, when he found the left round ligament so extremely attenuated that it afforded no hope of a successful result, and, consequently, the operation was abandoned. The vein accompanying the cord was very much congested, which he regarded as indicating venous congestion of the pelvic viscera. Dr. T. said that in this case he had no doubt but that the congenital defect of the round ligaments was responsible for the displacement and sufferings of his patient. He might add that withdrawing the cord to the extent of two inches gave no control of the uterus. Whether this was due to a superfluous extent of cord, or some internal adhesions, he did not know. He considered this an instructive case, and from it would gather that the cases most likely to be benefited by this operation are those of acquired dislocations in those who have ceased bearing children, and where we have reasonable ground to expect a normal development of the round ligaments. He submitted this case as a small contribution to the literature of this subject, in the hope that other observers may pursue the investigation and define,

with approximate certainty, the class of cases in which it should be performed.

Dr. Alloway said that the proper selection of cases was of the utmost importance. He had pointed out in his paper that there should be no evidence of pelvic inflammation, especially parametric tenderness, nor ovarian disease, and that the uterus should be freely moveable in all directions. Upon these grounds he would draw attention to the unfitness of Dr. Trenholme's case for Alexander's operation; and observe that the reports of such cases tend to bring discredit alike upon a probably humane procedure and upon the surgeon whose name it bears. From the fact that the uterus in Dr. Trenholme's case was easily replaced, and that traction to the extent of two inches gave no control over that organ, Dr. A. was inclined to think that Dr. Trenholme had a fasciculus of muscle-tissue in his grasp and not the round ligament, as supposed. Dr. A. stated that this is a very common error, and that it had happened to himself several times when operating on the cadaver; but from the fact that traction upon this supposed ligament does not control the uterus, if that organ be not fixed, we learn that we have not seized hold of the right structure.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, May 4th, 1886.

The President, Dr. Stark, in the Chair.

(*From our own Correspondent.*)

After the routine business, the following interesting case was brought before the society :—

Strangulated and Ruptured Ovarian Cyst—Peritonitis—Fatal.—Dr. Malloch exhibited a strangulated multilocular ovarian cyst, and gave a history of the case, which unfortunately proved fatal. When called to see the case the patient had been suffering from Friday till Monday morning and there was general peritonitis. A tense, acutely painful tumor was to be felt on the left side of the abdomen, stretching up from the left iliac fossa to near the false ribs. He advised operative inter-

ference as the only means offering a chance of life. When the peritoneum was opened masses of thick tenacious, jelly like substance escaped with blood clots; the tumor lay so far to the left that it could not be touched; the wound was then enlarged to five inches, the tumor could not then be brought into view until some of the inflamed and distended bowels had escaped. A trocar was passed into the black tense cyst when brought to the wound, but nothing flowed through it, the tumor was then slowly drawn out and in doing so a cyst upon the anterior and superior surface of the tumor was seen discharging its contents, which were similar to what had escaped from the abdominal wound. The pedicle was then untwisted and a ligature applied with the Staffordshire knot, the tumor was then cut away. The first ligature slipped and had to be replaced by three separate ligatures. Sponge after sponge was then removed loaded with jelly-like substance and blood. The patient showed signs of collapse and washing out of the abdominal cavity could not be done; some difficulty was experienced in returning the distended bowels, a drainage tube was left in, and the wound closed with stitches very closely applied. The patient recovered from the shock, but died in thirty-six hours, delirious; temperature in axilla, two hours before death, $106\frac{2}{5}$°F., nothing could be sucked through the drainage tube after the first four hours, so it was removed. He stated that this was the second case of strangulated ovarian cyst that he had met with; that out of three cases of ovarian or par-ovarian cysts seen in two years, two of them were thus complicated. The first case of strangulated ovarian cyst which was successful he had reported to the society in 1884. From this experience one would be inclined to infer that strangulation was not an uncommon event in the history of ovarian diseases, this, however, is not the case, as in Mr. Lawson Tait's first 100 ovariotomies he had only once met this complication, and many ovariotomists had never met with this unfortunate complication. This case, he thought, was peculiarly interesting. It occurred on the left side, whereas by far the greater number of cases are right-sided. To his mind it completely refuted Mr. Lawson Tait's theory with regard to

the cause of the twist of the pedicle in these cases. Dr. Malloch's first case was right-sided, direction of twist not noted ; but in this case the direction and degree were seen by all present. In general, as he understands it from Mr. Tait's book, the direction of the twist in right-sided cases is from below outwards to the right and then across to the left, and that the direction is given by the impingement of masses of faeces passing down the rectum. In this case the direction of the twist was from the middle to the left and then round towards the pubis, the rectum being in its normal position, he thought the twist would be the very reverse were it due to the passage of fæces down a left side rectum. From a diagnostic point the case was interesting, as the tumor lay over the descending colon and did not reach the middle line, the length of the pedicle could not have been three-quarters of an inch. The patient had been operated upon for ovarian disease some fourteen years before by Dr. Keith, of Edinburgh. In his first case Dr. Malloch advised an operation to remove tension in the abdominal cavity affected with peritonitis, not knowing that the cyst was strangulated, and he thinks that with symptoms of peritonitis and an abdominal tumor likely at all to be removed an operation is called for.

Discussion.—Dr. A. Woolverton said he thought the case a very interesting one, and had the operation been performed earlier the patient might have had a better chance of recovery.

Dr. Leslie advanced a theory to account for the twist in the pedicle, supposing the cyst to have first ruptured and set up inflammation and distension of the abdomen, thus causing the twist.

Drs. Philp, Mackclean, Shaw and McCargow made some remarks.

Dr. Hillyer read a medico-legal paper bearing on a case in his practice which was freely discussed.

CANADA

Medical and Surgical Journal.

MONTREAL, JUNE, 1886.

IODIDE OF POTASSIUM IN INTERNAL ANEURISM.

The undoubtedly marked influence which the iodide of potassium possesses in at least relieving the great sufferings of patients with aortic aneurism is well known. Many have been the hypotheses advanced to explain how this drug acts in the cases where it does good. Its beneficial influence being attributed by some to its "antisyphilitic" action, while others consider it due to an "alterative" effect on the coats of the diseased vessels. That the former is not the true reason is shown by the fact that mercury, a more powerful antisyphilitic agent, has not any influence in even mitigating the symptoms, and further, the iodide acts equally well in those cases where syphilis, as a factor in the production of the arterial weakness, can be absolutely excluded. That it acts through influencing the nutrition of the arterial walls is unlikely when we consider the inutility of agents possessing as high alterative powers. The evidence that it is through a lowering of the intra-arterial tension that the drug acts, is now, it may be said, fully established.

The success of the treatment essentially depends on the bringing about a certain degree of lowered tension. If the lowering is too great it can be readily understood that the progress of the dilatation will be hastened in place of retarded. The lower the tension the quicker is the action of the heart, and any gain obtained by a diminution in the pressure which the weak spot has to sustain is more than counterbalanced by the more constant pressure which is brought about by the quickened heart. That the normal pressure is too high is, of course, self-evident

from the natural history of the great majority of cases of aneurism. We have then to endeavour to find a mean between the normal pressure and one too low. When this mean is obtained, the arterial coats behave, as Balfour puts it, "like a hollow muscle," which hypertrophies when opposed to obstacles with which it is unable successfully to cope. The dose required to bring about this sufficiency of lowered tension and no more, will vary somewhat in each case. From ten to fifteen grains will be found to be generally sufficient. The quantity is easily ascertained by placing the patient in bed for a few days without any other treatment, and his pulse rate attained night and morning for a few days. He is then given ten grains of the iodide three times daily. If the pulse rate remains unchanged the dose is increased to fifteen grains three times daily, and every week an increase of five grains to each dose is made until the pulse begins to rise. When the pulse rate is slightly increased, we have attained the proper quantity. More than that will do harm, less will do no good.

It will be seen, therefore, how important the matter of dosage is in the treatment of aneurism with iodide of potassium. It is to Dr. Balfour, of Edinburgh, that we owe most of our knowledge of the action and uses of this agent in aortic aneurism.

LAWSON TAIT'S ABDOMINAL SURGERY.

In the *British Medical Journal* for the 15th of May, there is a remarkable article by a very remarkable man. It is a record of 139 consecutive successful cases of ovariotomy performed during the years 1884 and 1885 by Lawson Tait, of Birmingham. This wonderful achievement places this operation in the list of finished operations. As Tait says the time has about arrived when we had the last word to say about it. The great value of the article is not so much the wonderful record of successful operating, but rather the great suggestiveness of some of Mr. Tait's reflections. One of the most striking of these ideas is the peculiar way in which he alleges he deals with commencing peritonitis. In place of giving the time-honoured opium, he directs his patient to have a smartly acting

purgative, it matters not what. After the bowels are cleared out the peritonitis, he says, disappears. This is all the reference that is made to this important subject. We are not told what he considers to be the essential symptoms of peritonitis. When a traumatic peritonitis can run its course from first to last without any increased action of the heart or elevation of the temperature or any particular form of pain, how can it be differentiated from the many other conditions of a passing nature which closely resemble it?

The sweeping statement that purgatives do good in peritonitis will certainly do much harm. That purgatives are injurious in cases of established idiopathic peritonitis there can be no manner of doubt. That they are beneficial in traumatic peritonitis is highly improbable. Mr. Tait treats suppurative peritonitis as he does an abscess. He opens the abdomen and washes and drains out the pus. There is more logic in this mode of treatment than the purgative treatment of acute peritonitis. Although extremely bold, it is the carrying out of a recognized surgical principle.

THE LOOMIS LABORATORY.

The Medical Department of the University of the city of New York has recently received a gift of $100,000, to be devoted to the construction and maintenance of a laboratory building, to be known as the Loomis Laboratory. The generous benefactor, who desires to remain unknown for the present, deserves the thanks of all who have the cause of higher medical education at heart. It is a good omen for the cause of scientific medicine on this continent, to find men able and generous enough to give so handsomely for the endownment of chairs and laboratories in medical schools. The princely gift of $50,000 made three years ago by Sir Donald A. Smith to the Medical Faculty of McGill University was almost the first recognition by the public of the great work that is being done by medical schools. Lately the Vanderbilts and Carnegie have followed this example, and now we have to add to this worthy list the donor of the Loomis Laboratory to the University of New York.

We sincerely hope that we will be called upon time and again to notice similar gifts. The day has fortunately passed when all the good things are monopolized by the Faculties of Arts and Theology.

The Health Bill.—Some months ago a public meeting was held in this city with the view of forwarding the enactment by the Provincial Legislature of an effectual bill concerning Public Health and Vital Statistics. The deficiencies in the present law, and the practical difficulties thus frequently presenting themselves in the face of an epidemic, were fully recognized last year, and there is a strong feeling in favor of more extended legislation. The meeting delegated the further consideration of the entire subject to a large committee composed of representatives of the various portions of the community—the Central Board of Health, the Local Board of Health, the Citizens' Committee, the Catholic and Protestant clergy, and the medical profession. This committee spent much time at several meetings in drafting such a bill as it was thought would be acceptable to the House. It provides for the formation of a permanent Provincial Board of Health, and of Local Boards everywhere, with such machinery as would render the former competent to exert a general supervision over sanitary matters with authority. At the present moment the bill is before a special committee of the House, and, we regret to observe, has been shorn of several of its most important provisions. We shall hope to return to the subject next month.

COLLEGE OF PHYSICIANS AND SURGEONS OF THE PROVINCE OF QUEBEC.

The semi-annual meeting of the Provincial Medical Board was held in Montreal on Wednesday, 12th of April. Beyond routine business, the only matter of considerable interest to the profession generally was the committee's report, which we give herewith. It will be observed that the changes it is recommended to introduce are of a most extensive kind and which, if acted upon, will make a radical alteration in the mode of obtaining the license to practice in the Province of Quebec. The estab-

lishment of a Central Board of Examiners to pass upon the qualifications of all candidates for the license is but following in the footsteps of the Province of Ontario, where the system has worked well. Though often previously discussed here, a great practical difficulty, not existing elsewhere, always presented itself, viz., the necessity for making provision for both French and English-speaking students, and the expense which would be involved thereby. The recommendation of the committee provides for this. The second item of importance is the proposal to formulate a scheme by which the members in each division of the Province shall elect their own representatives to the governing board. This method we have already advocated, and it will, no doubt, commend itself to all. It was resolved to print the draught of the committee's report and have it circulated amongst the members of the College at least a fortnight before the triennial meeting, which takes place in Montreal on the 14th July next. The Governors have arranged to hold a special meeting on the day preceding this, for the careful consideration of these matters.

The Committee appointed at the last semi-annual meeting of the College to consider the amendments necessary to put into force the report of the committee on the financial condition of the College, also to consider the suggestions made at the last triennial meeting, with regard to the manner of electing the Governors, as well as the notice of motion given by Dr. L. LaRue, regarding the establishment of a Central Board of Examiners, met in the city of Montreal on the 16th of February, 1886. There were present Drs. Lemieux (President), Simard, Guay, L. LaRue, Lachapelle, Austin, Hingston and Campbell.

Several hours were spent in discussion when the committee declared it was in favor of the College having a Central Board of Examiners.

It also came to the conclusion to suggest that the following subjects be made part of the preliminary examination, and that they be made obligatory—Moral and Intellectual Philosophy—Physics, Mineralogy, Geology, Astronomy and Botany.

Time for adjourning having arrived, it was moved by Dr. Simard, seconded by Dr. Austin, That a sub-committee, composed of Drs. Geo. Ross, Hingston, Lachapelle, Leprohon and F. W. Campbell be named to complete the work of this committee concerning the alterations to be made in the Medical Act, all in conformity with the resolution passed at the last semi-annual meeting of the board. Carried.

The committee adjourned *sine die*.

The sub-committee, appointed by the general committee, met on February 27th, March 1, 7, 10 and 15, also on 7th May.

They beg leave to submit the following as the result of their deliberations :—

1. The board shall be known as the Central Board of Examiners, and shall consist of two examiners on each subject, one English and the other French. Both shall assist at the examinations, but the immediate conduct of the same shall be by the examiner speaking the language to which the candidate belongs.

2. The Central Board of Examiners shall consist of a representative from each medical school now recognised by the Medical Act, and of an equal number not connected with any medical school.

3. The Central Board of Examiners shall be appointed annually by the Provincial Medical Board, the names being submitted by a nominating committee, which nominating committee shall be named by the President, subject always to the revision of the Medical Board. It shall consist of one representative from each medical school and an equal number selected from the members of the board not connected with any medical school. In case of a vacancy occurring on the Central Board of Examiners, either by death, resignation or removal, the said vacancy shall be filled by the President of the College.

The members of the Central Board of Examiners may or may not be chosen from among the members of the Provincial Medical Board.

The Central Board of Examiners shall commence their examinations on the second Tuesday in April, and they shall be held

at Montreal or Quebec, as may be decided by by-law of the board.

The fee to be paid to the members of the Central Board of Examiners shall be $10 per day, and mileage at the rate of five cents per mile.

The professional examination shall be divided into primary and final. The examinations shall be written and oral:—

Fee for Primary Examination	$10.00
" Final "	10.00
" Diploma of Membership	25.00

The preliminary examination shall be held on the first Wednesday in July, at Quebec or Montreal, as may be decided by a by-law. (The suggestion of the general committee of additions to the preliminary examinations is not considered wise. The sub-committee are of opinion that no change should be made in the preliminary examination.)

Graduates in Arts of any University in Her Majesty's Dominions to be exempt from passing the preliminary examination.

Dr. Hingston objected to the above clause on the ground that it was incomplete, and moved the following addition:—

"That any student who shall have attended a complete course of classical studies, and shall furnish proof of having passed an examination equivalent to an examination in Arts shall also be exempt from the preliminary examination."

The preliminary examination for admission to the study of Medicine shall be held on the first Wednesday in July.

The Board of Governors shall meet annually on the second Wednesday in July, the place of meeting to be definitely settled by a by-law of the board. The sub-committee think it advisable that a permanent locality for this meeting be selected.

That each district shall, after these amendments become law, elect its own representatives.

The Registrar shall two months previous to the date of election furnish to the Secretary at Quebec a list of all those qualified to vote in the city and district of Quebec, and district of Three Rivers; and to the Secretary in Montreal a list of those quali-

fied to vote in the city and district of Montreal, and the district of St. Francis. If there be only one Secretary, then to the person holding that office. One month previous to the election he shall send out printed ballot papers, which shall be signed by the voter, sealed and returned within two weeks to the Secretary whose signature is on the ballot paper, who, upon receipt of the same, shall place them unopened in a ballot box, which shall be placed locked in the hands of the Secretary, and which shall only be opened in the presence of Scrutineers named, who shall count the ballots and declare who has received the majority of votes.

A printed list, giving the result of the ballot, shall immediately be posted to each voter.

The election of Governors shall take place on the first Wednesday in June.

The Scrutineers shall be named by the presiding officer at the meeting of the Board held preceding the triennial election.

The majority of the sub-committee are of opinion that the amendments regarding the Central Board of Examiners shall only apply to those who enter upon the study of Medicine after the 1st of May, 1886. A minority are of opinion that they should come into operation at once.

Medical Items.

—Any village or town physician wishing a vacation to visit New York or London hospitals, and wanting a city graduate in medicine to take his practice, during July and August *only*, may do so by addressing "Doctor," Box 579, Kingston.

Personal.—We are pleased to learn that Dr. J. B. Lawford, formerly of Montreal, has been appointed Assistant Ophthalmic Surgeon to St. Thomas' Hospital, London. Since embracing a specialty, Dr. Lawford's promotions in the London special hospitals have been rapid, and there is every indication of his attaining to success and a high position.

—Mr. Savory, President of the Royal College of Surgeons, was offered a knighthood in commemoration of the Queen's laying the corner-stone of the new Examination Hall. He, how-

ever, declined the proffered honor, it is generally thought, because it was not a baronetcy. We now learn that the knighthood has been conferred upon Dr. Dyce Duckworth, whom we congratulate upon this mark of Royal favor.

Celluloid Tape-worms.—All the world has heard of the Yankee wooden nutmegs, but the folks near the Pacific Coast seem to possess an ingenuity which would shame a New Englander. A correspondent of the *Southern California Practitioner* writes: "Our unsophisticated villagers go to your metropolis for treatment, and return with yards of tape-worm, in bottles, very handsome, and doubtless worth all they cost. Now what I want to know is: Where do you get them, and what is the factory price per yard, for they are—*celluloid?*"

Chloral as a Vesicant.—Hydrate of chloral has, according to the London *Medical Record*, been successfully employed instead of cantharides for blisters. For this purpose powdered chloral is sprinkled on previously slightly warmed adhesive plaster. Vesicles are raised by it in about ten minutes. The advantages of this blister over other kinds are rapid and perfectly painless action, and absence of any of the troublesome effects sometimes caused by cantharides.

Dr. Holmes advises Doctors to take a Vacation.—Instead of a vacation editorial, which would naturally be looked for by our readers with eager interest at about this time, we venture to substitute a little verse from Dr. Holmes' poem, "City and Country":

> Ye healers of men, for a moment decline
> Your feats in the rhubarb and ipecac line;
> While you shut up your turnpike, your neighbors can go
> The old roundabout road to the regions below.

—*Med. Record.*

—The editor of the Kansas City *Medical Index* says: "It has been my 'fortune' to see a young and lovely virgin brought to one of these speculomaniacs, seized and placed upon the gynæcological 'altar,' her clothes pulled up, hymen ruptured, speculum introduced, and probe pointed at the cervix, before the astonished maiden could explain that she sought the services of his 'majesty' the gynæcologist for an epilepsy caused by an injury to the head."

CANADA

MEDICAL & SURGICAL JOURNAL

JULY, 1886.

Original Communications.

ALEXANDER'S OPERATION OF SHORTENING THE ROUND LIGAMENTS.

By T. JOHNSON ALLOWAY, M.D.,
Gynæcologist to the Montreal Dispensary.

(Read before the Medico-Chirurgical Society of Montreal.)

Mrs. —, aged 29, married eleven years. She has had four children at full term and three miscarriages, the last miscarriage occurring twelve months before operation. About eighteen months ago she consulted me for uterine trouble. I found a retroflexed, but moveable, uterus. There was no evidence of past pelvic inflammation. The treatment she underwent during the following few months seemed to benefit her a good deal, but her health failed somewhat on the occurrence of pregnancy. The uterus now became gradually incarcerated in the pelvic excavation. The sharply retroflexed fundus could not be forced from its position without using greater force than was thought justifiable. At about the third month of gestation the patient miscarried. The fundus uteri could then be lifted forwards, but on removing digital pressure it would fall back again. All manner of retroflexion pessaries were now tried without benefit. Columning the vagina with the boro-glyceride tampon once a week seemed to be the only procedure which would support the displaced uterus, and then only when placed in a very careful manner. Attended to in this way, however, the patient could walk long distances and feel perfectly well and free from pain, and it was this fact which led me to regard her's as being a suit-

able case for Dr. Alexander's operation. Accordingly on the 19th February the operation of shortening the round ligaments was performed. About two and a half inches of the ligaments were withdrawn and removed. A glass stem and Thomas' cup pessary were introduced, and the wound dressed with iodoform and borated absorbent cotton. The stem had to be removed on the third day, as it caused most severe reflex pain in the hypochondriac regions and shoulders, and also rather profuse metrostaxis. A Hodge pessary was now tried, but had also to be removed in the course of a week. The last examination of the patient took place three months after the operation; the uterus was found in a normal position, the patient free from pain, and completely restored to health.

Patients to be considered suitable cases for this operation should be subjected to treatment such as the boro-glyceride tamponade for several weeks, in order that all inflammatory exudates be removed sufficiently to allow of perfect mobility of the uterus and disappearance of the slightest tenderness in the parametric tissue. This course of treatment includes absolute confinement to bed. To operate under any other circumstances will be liable to jeopardize the life of the patient and bring discredit upon the operation.

It will be necessary here to give a description of the steps in detail of the operation, and I cannot do better than quote from Dr. Alexander's article in the *British Gynæcological Journal*, November, 1885 (pp. 250 *et seq.*) He says:—

"I will now point out what I think the best way to make sure of finding the ligaments; but I would warn anyone who intends to operate, no matter what their standing, to practise it first a few times on the dead subject if they wish to avoid disappointment. The pubic spine is the first landmark, and can be felt by an intelligent finger under any depth of superincumbent fat. It does not matter very much whether the finger can feel the spine clearly or not, provided the primary incision is made within reasonable distance of it, but there need be no serious difficulty in feeling it. From this an incision is to be made upwards and outwards in the direction of the inguinal canal for one and a half,

two, or three inches, according to the fatness of the subject. A considerable thickness of subcutaneous fat is now met with, which must be cut through by subsequent incisions until the pearly glistening tendon of the external oblique muscle is reached. Midway through the fatty tissue an aponeurosis sometimes appears, so firm and smooth that it may cause the operator to think he is deep enough; and if he begins to poke about here, as I have done and have seen done, it is little wonder no ligaments can there be found. The first stage of the operation consists simply in cutting down upon the tendon of the external oblique muscle until it appears clear and shining at the bottom of the wound. If the operator succeeded in hitting the spine, the external inguinal canal, with the intercolumnar fibres crossing it, can also be seen. If not, the aperture made down to the muscles can be dragged over an extensive area by retractors, so that the region can be searched until the ring is found. The finger, passed to the bottom of the wound, may be used to detect the spine and the ring outside, the former by its hardness, and the latter by its lessened resistance compared with that of the aponeurosis around it. The anatomical knowledge of the operator should always be equal to the recognition of these structures—that is, the spine and the external abdominal ring. There are other apertures, as the aponeurosis, and a depression filled with fat below Poupart's ligament, that sometimes simulate the external ring. Poupart's ligament below, the intercolumnar fascia running across, and the spine at the inner side, are sufficient landmarks. When in doubt, a slow deliberate survey of the position should be taken, and no gropings in the dark made, as these are certain to lead to failure. Having clearly isolated the external abdominal wound, and tied or compressed any little vessels necessary to be attended to, the next step in the operation may he entered upon—viz., to find the end of the ligament. The intercolumnar fascia, which is generally pushed forward by the fat and other structures beneath, is to be cut through over all the extent of the external ring and in the direction of its longest diameter: a nerve, some vessels, fat, some tendinous bands, and the round ligament springs out of the canal immediately.

In fat people the quantity of fat conceals all the other structures. No 'grabbing' at the mass is now to be practised, as some have recommended. By everting all the structures upwards the round ligament can be seen generally at the lowest part, and with the white, easily distinguished genital branch of the genito-crural nerve along its anterior surface, and close to it. The ligament at this stage is more or less rounded in shape, sometimes rather delicate, but an always easily recognized flesh-colored structure that might be easily destroyed by forceps rudely and blindly applied. Should the ligament seem very frail, or the operator be doubtful whether he has found it or not, he should take care not to displace the structures, or to destroy them by searching or pulling. His best plan in such a case is to open up the inguinal canal a little, and then re-examine what he supposes to be the ligament. No difficulty in finding the ligament need thus ever be experienced, provided the operator knows what he is about. When the ligament is clearly identified, the small nerve on its surface is to be cut through without cutting any of the ligament; then gentle traction is to be made either by the fingers or broad blunt-pointed forceps. Care must be taken not to break the ligament by such traction. Bands will now be seen holding it to the neighboring structures. These should be cut through with scissors, the greatest caution being used to avoid notching the ligament itself at the same time. With a little patience and perseverance the structure is so far free that all resistance is at an end, and it comes out as easily as if broken inside, as Dr. Mundé thought it was in his first case. As soon as it begins to peel out, and without drawing it out further, I leave that side after covering the wound with a clean sponge, and operate on the opposite side. To do so, my assistant and I change sides, so that I always stand on the side opposite to that on which I am operating. I can look thus better into the canal, and draw the ligament more conveniently towards me; but, of course, the operation could be performed without this change ef position. Having freed the opposite ligament, the difficulties of the operation are at an end, and the second stage is finished. I cannot on paper give with advantage a more detailed description of how

to perform the second stage. It must be seen to be thoroughly understood. The third stage consists in placing the uterus in position, by the sound, and pulling out the ligaments until they are felt to control that position. The replacing of the uterus is first performed, and is held in position by a third assistant. The operator pulls out both ligaments almost simultaneously and gently, until the sound is felt to be slightly moved. He then hands both to the first assistant to hold, while with the curved needle, threaded with moderately fine catgut, he stitches each to both pillars of the ring by two sutures on each side, and thus secures the closure of the external abdominal ring, and the fixation of the ligament without injuriously strangling the latter structure as it lies between. The assistant can now let go, the chafed ends of the ligaments are cut off, and the remainder stitched into the wound by means of the sutures that close the incision. A fine drainage-tube is inserted, and the wound washed out with carbolic or other lotion before these sutures are tied. In hospital I perform the operation under the spray, and use the gauze dressings. In private I dispense with the spray, and sometimes use boracic lint or absorbent cotton wool. I always drain, as I believe it to be much safer, preventing any collection of pus or danger of interfascial suppuration. It may retard in some cases the healing of the wound, but as I never allow my patients out of bed under three weeks, this is not of much importance. Before the dressing is applied, in simple cases of retroversion and prolapse, I insert a Hodge's pessary, and keep it in at least during convalescence. When there is retroflexion as well, I always insert a galvanic stem to keep the uterus straight during the healing of the wound. This I look upon as essential. By keeping the stem in for a month or so, the cure may be with certainty effected. An important question with regard to the third stage of the operation is, how far are the ligaments to be pulled out? My reply is, to put the uterus in position and pull out the slack. The after-treatment of the operation consists in rest. The wound I generally dress on the second day, when I remove the tubes, the small aperture left where they were removed being sufficient to maintain the necessary drainage in

most cases. The ligaments should be allowed time to unite to the wound, to the pillars of the ring, to the canal, and for this purpose three weeks is quite short enough time. Several of my private patients have taken a longer rest, and with benefit, as thus all the pelvic organs have become accustomed to their new position. The rest need not be in bed—a sofa and the sitting posture may vary the monotony of lying in bed, whilst sewing, reading, and other feminine arts may be indulged in after the first few days."

As regards the future of the operation, one feels inclined to speak carefully ; but judging from the way it has been favorably received and discussed at meetings of eminent societies in Europe and America we must acknowledge that its field of application and usefulness will become largely increased. At a meeting of the Obstetrical Society of New York, April 6th, 1886, Dr. Polk stated that he had operated fifteen times, and that he was satisfied the operation would prove an extremely valuable contribution to surgical gynæcology. Views of this nature coming from an authority so highly respected as Dr. Polk must tend to remove the objections usually made by weak-knee'd *pessary-gynæcologists*. I am firmly convinced that the day of treatment of retro-displacements and procidentia with pessaries is fast drawing to an end, and the bright sun of operative surgery will be seen shortly looming up over the now dark horizon, dispelling the last streak of inert empiricism.

ADDENDUM TO PAPER ON CEREBRAL ANEURISMS.

By WILLIAM OSLER, M.D., F.R.C.P., Lond.

I accidentally overlooked the records of two of the most interesting cases of aneurism of the cerebral vessels, one of which was shown Nov. 17th, 1882, and the other May 25th, 1883, at the Medico-Chirurgical Society. The case of the boy aged 6 is specially interesting, as it is, so far as I know, the youngest case on record. I append the notes:—

Case XI—*Aneurism of left middle Cerebral Artery.*—Woman, aged 62. Admitted in a semi-unconscious state, with

right hemiplegia, which came on after a fit three days before. Death occurred on the seventh day after admission. There was extensive hemorrhage in the meninges of left Sylvian fissure, and thin clots also at the base. The inner and anterior part of left temporal lobe was lacerated. A small sacculated aneurism the size of a pea was found on left Sylvian artery, just within the fissure. The walls were extremely thin, and the orifice of rupture large. The vessels of the circle of Willis were atheromatous. No heart disease.

Case XII—*Aneurism of branch of Anterior Cerebral in Longitudinal fissure.*—Boy, aged 6, brought to hospital unconscious, with feeble pulse, pale face, eyes and head turned to right, and left hemiplegia. Death in six hours. He had fallen from a hay-loft three weeks before, but he recovered rapidly from the effects. There was meningeal hemorrhage at base and in longitudinal fissure. On separating the median surfaces of the hemispheres, and clearing away the blood, a small nodular projection was seen on the right side, about the middle of the gyrus fornicatus. This proved to be an aneurismal sac imbedded in the colloso-marginal fissure just where it turns vertically upwards. The rupture was on the meningeal surface, but there was hemorrhage into and slight laceration of the contiguous portion of the brain substance. The arteries were not atheromatous, and the heart was healthy.

CLINICAL REMARKS ON THE TREATMENT OF COMPOUND FRACTURES.

Delivered at the Montreal General Hospital, 12th May, 1886.

By FRANCIS J. SHEPHERD, M.D., Surgeon to the Hospital.

Gentlemen :—The treatment of compound fractures was, up to the period of the introduction of antiseptics, in a very unsatisfactory state. The surgeon always dreaded the occurrence of such fractures in his practice, knowing how uncertain the results of treatment were, and how often these cases died of blood-poisoning. If the external wound was small, good results frequently resulted by immediately sealing the wound with its own blood, collodion, or the compound tincture of benzoin, but not unfre-

quently the wound failed to close and suppuration ensued, often necessitating an amputation, which frequently ended in death. Occasionally there was not time for amputation, the patient dying rapidly of pyæmia.

If such results not infrequently followed fractures accompanied by slight wounds, in larger wounds, with much laceration of tissues, the leg was rarely saved, and if not amputated immediately, fatal pyæmia generally followed. The idiosyncrasy of the patient and not the surgeon and his methods had to bear the blame of the fatal issue. It was only with the knowledge of the principles of antiseptics and their influence in wound treatment that the cause of failure of success in the treatment of wounds was understood; then it was found that it was from external and not internal sources that danger was to be feared. Lister was the first to insist on the necessity of absolute cleanliness, not only of the wound, but of the surgeon himself and the instruments employed by him. He introduced the method of treating compound fractures by carbolic acid. It was first employed in the form of a paste made with whitening and linseed oil, and gave very fair results, remarkably lessening suppuration. Later, the gauze, spray and McIntosh were employed, and wounds connected with fractures were treated like wounds in other parts with the best results, but with an infinite amount of trouble. Still later, iodoform and bichloride of mercury came into vogue, and dry and infrequent dressing of the wound with some antiseptic absorbent material, such as cotton-wool, jute, peat, wood-wool, etc., surpassed any method that had previously been employed. This method of treatment I shall shortly describe, the results have been most excellent, and, armed with a knowledge of modern antiseptic surgery, no surgeon need now dread treating a compound fracture of the leg, even if the bones be comminuted and the wound large.

Compound fractures being most common in the leg, I shall describe the treatment adapted to such a case. The method is as follows* :—

* In describing this method, it is, of course, understood that before treating the wound the surgeon's hands and instruments should be rendered aseptic by the usual means, a description of which is unnecessary here.

When called to treat a compound fracture of the leg, if there is severe hemorrhage and the wound is small, it would be better to enlarge it and search for the bleeding point. Having arrested all hemorrhage and placed the fragments in proper position, the wound should be thoroughly irrigated with a solution of 1–1500 of mercuric bichloride and then dusted freely with iodoform; over this, some washed gauze wrung out of bichloride solution is placed over the wound, and over this a pad of finely-carded sublimate jute, covered with bichloride gauze, and dusted with iodoform. This pad is kept in place by an antiseptic gauze bandage, and the leg placed in a McIntyre or other splint. The pad, if there be much oozing, should be removed next day and a new one applied, but the gauze over the wound had better not be disturbed. After this the dressings should not be changed unless the temperature and general condition of patient indicate that something has gone wrong in the wound. In my cases, as a rule, the second dressing has been left on a month, with result of finding, on its removal, the wound perfectly healed. If the wound is not of very large size, I have been in the habit of immediately putting up the leg in plaster-of-paris bandages, leaving a window opposite the wound, protecting it with an antiseptic towel whilst the plaster is being applied. The edges of the window I stuff with antiseptic jute to prevent the blood and serum getting under the plaster. After the plaster has been applied, the wound is dressed in the way I have described above. It is a very rare occurrence that the dressing has to be removed after the second day, when oozing generally ceases. In one case treated in ward 23 last summer, where there was a compound fracture of the ankle joint, with rupture of the posterior tibial artery, the wound was enlarged, the artery tied, and the parts dressed with iodoform and a large jute pad, and left undisturbed for a month, with the result of finding, at the end of that time, the wound completely healed. The temperature never rose above 99°F. In another case of compound fracture of the thigh, the same result followed the same course of treatment; and many fractures of the leg have healed in this way without the slightest febrile reaction. When the wound is large, sutures

of catgut are used ; but when not very large, no sutures at all are employed, the wound apparently, with the aid of iodoform, which forms a crust over it, healing as under a scab.

I take this opportunity of presenting to your notice the patient, Ed. N., aged 33, sailor, now before you, who has occupied a bed in ward No. 23 for the last nine months. His history is shortly as follows: On the 11th of August, 1885, he was brought to the hospital with severe compound fracture of both legs, consequent on falling some twenty feet into the hold of a ship. He had lost a considerable amount of blood, and there was a good deal of oozing when he was admitted. My house surgeon, Dr. Eberts, as it was near the visiting hour, merely put on an antiseptic towel and bandage. On my arrival, I found that patient had sustained a compound comminuted fracture of left leg, the wound in soft parts being some two inches long, and a compound fracture of right leg, with considerable riding of bones and a large amount of laceration of soft tissues. Both legs were much swollen. After cleansing the wounds in both legs thoroughly, the left was put up in plaster-of-paris bandages, a window being arranged for opposite the wound. The right leg was so severely lacerated that it was not thought wise to put it up in plaster, so a McIntyre splint was employed. The wounds were dressed in the manner I have already described. The same night, owing to the profuse oozing of blood, the dressings had to be changed. From that time till the 9th of September (nearly a month) the dressings were not removed, and then the wounds were found completely healed, or, rather, scabbed over. After the third day, the temperature, which, on the second day, rose to 100°, was perfectly normal. The fracture of left leg, on removal of dressings, was found to be firmly united, but there was no union in the right, in which, as I said before, there was considerable riding of fragments, the bone being broken about the junction of lower with middle third. The bones were rubbed together and put up in plaster-of-paris. From time to time this was renewed, the man being allowed to go about early in November, and at present you see he has fair union in right leg, but some shortening. He leaves hospital during the present week to return to his occupa-

tion. I have advised him to wear for a time the plaster splint on his right leg. This case is a very good example of the happy results of this method of treating compound fractures when the wound is very extensive. Before the introduction of antiseptics the man would probably have had one leg amputated, and might possibly have lost his life by some form of blood-poisoning in the effort to save the other. As it is, the man is in a fit condition to resume his ordinary work, and the accident will not in the slightest degree interfere with his future prospects.

QUARTERLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By WILLIAM GARDNER, M.D.,
Professor of Gynæcology, McGill University; Gynæcologist to the Montreal General Hospital.

Treatment of Chronic Pelvic Abscess.—Pelvic abscess, after spontaneous rupture into the bowel or vagina, or after vaginal opening by the surgeon, occasionally runs a very chronic course. As is well known, Mr. Lawson Tait of Birmingham, with a view to preventing this, has devised and many times practised the method of opening the abscess by abdominal section and drainage. In certain cases this method is undoubtedly to be commended, but it will not suit in all; moreover, many cases do not reach the surgeon till long after spontaneous rupture, when the conditions of the abscess cavity are such that free drainage and irrigation will not suffice to cure. The walls are in a condition of chronic granulation or contain trabeculæ, or present numerous loculi or nooks in which pus and other debris lodge—each or all of these conditions may obtain. The action or condition of the wall must be changed. An interesting example of the disease, with cure, is reported in a paper recently read before the Chicago Gynæcological Society by Dr. Henry T. Byford. The patient, aged 25, contracted cellulitis returning from a dance. At the end of six weeks the resulting abscess burst into the rectum. Palliative treatment was continued for ten weeks without effect. The pulse remained about 120, and the temperature ranged from 99° to 102°F. Pain and septicæmic diarrhœa were fre-

quent. The bacillus of tuberculosis was found in the pus. She became so emaciated as to weigh only 83 pounds. It was then decided to operate. Dr. Wm. H. Byford, after etherization, forcibly dilated the sphincter of the anus, tore open the fistulous tract with the finger, and dilated the abscess cavity, scraping off granulation tissue and bands. All this was scooped away and the cavity thoroughly cleansed with a 2½ per cent. solution of carbolic acid. The highest temperature after the operation was 99°F. Perfect drainage had been secured. The cavity of the abscess was treated by irrigation with antiseptic solutions, insufflation with iodoform, and the introduction of sulphate of copper. At the end of two months she had gained 13 pounds. Three months after the operation she contracted dysentery, which was then prevalent, and died soon after. At the autopsy no appearance of abscess cavity could be found; it was completely obliterated. Dr. Byford attributes much importance to the use of the sulphate of copper, and, speaking generally of this method of treatment in such cases, believes it to be safe and sure.

It has for some time been apparent to readers of medical journals that there is a coming reaction against the over-frequent performance of abdominal section for the removal of the uterine appendages. There can be no question that the operation has been abused, that women have been needlessly mutilated, and that certain conditions of ovaries and tubes thus removed are not pathological, but really physiological. Dr. H. C. Coe read a paper entitled "Is Disease of the Uterine Appendages as frequent as it has been represented?" before the New York Academy of Medicine on the 1st of April last. Dr. Coe said he did not intend by the title to imply skepticism so much as a mildly negative answer to the question. Our knowledge of the normal ovary is unsettled, but especially, so far as the text-books are concerned, is this true of our knowledge of conditions supposed to be included in such terms as ovaritis, periovaritis, etc. The question, then, naturally arose, What is a normal ovary? So much has been recently said about chronic ovaritis, cystic degeneration, etc., when speaking of specimens

removed, that, said Dr. Coe, the existence of a normal ovary, except in animals, might be doubted. Besides, the minute structure of the ovary was not constant, histologically. Hence reasons why it is difficult to determine where the physiological condition ended and the pathological began. "Ovaries had been removed because they were regarded as cystic, and yet it had not been decided what was meant by a cyst; that is, when the ovisac ceased to be a vesicle and became a cyst. Ovaries as removed in specimens often seemed to deviate from the types described and illustrated in text-books on histology, but on this account were not to be regarded necessarily as suitable to be plucked out. Then the question arose, To what extent may an ovary deviate from the so-called type without being diseased? In general, the conditions which had been said to justify an operation for the removal of ovaries were included under variations in size and shape, the presence of cysts more or less numerous upon their exterior, changes affecting the thickness of the cortex, and the stroma, adhesions, etc." The author then said that variations in shape could not justly be held to indicate abnormality. Moderate and even considerable increase in size may be due solely to congestion. Variations in position and in color are consistent with health. The ovary may be seamed and scarred. The cortex may be thickened when it is in full functional activity. Cystic degeneration was most frequently given as a condition that justified extirpation, and Dr. Coe had rarely heard the diagnosis of cystic degeneration called in question when three or four vesicles, not larger than small peas, had been found upon the exterior of the organ. If all the so-called cystic ovaries were to be regarded with suspicion, there were few women who were positively out of danger. He admitted, however, as had been demonstrated by Olshausen, a true cystic degeneration, but it is rare. He (Dr. Coe) asserted that an ovary with a half-dozen transparent vesicles as large as peas on its surface, and functionally active, did not justify the diagnosis of cystic degeneration and removal without regard to other and more positive indications. Partial disease, moreover, does not imply loss of function. Schröder recently removes only the

diseased portion of ovaries, with the expectation that what remained would perform the function of the organ. As regards the Fallopian tubes, if they were distended with pus, there was no difference of opinion that they ought to be removed. Such a case was plain, but rarer than generally supposed. He did not believe with Tait that in chronic ovarian disease the tubes are invariably involved. A healthy tube might be increased in size, but he had sought in vain for evidences of disease in the so-called catarrhal salpingitis. Moderate hyperæmia of the mucosa and a thin layer of mucus did not constitute disease. Cilia in active motion was proof against the presence of inflammation. Dr. Coe had examined all the cases within his reach, and they included a large proportion of the cases performed in the city, and he had found that in not more than one-fifth was pyo- or hydrosalpinx present. With reference to symptoms, he believed that they were not due to the condition of the ovaries and tubes so much as to localized peritonitis and neuralgia pure and simple ; and that these symptoms were removed by extirpation of the uterine appendages he did not believe. It would not be proven that a cure had been effected, until it could be shown that the patient was well at the end of six years after the operation. The special point he wished to insist on was that the presence of insignificant changes in these organs was insufficient to subject a woman to the risks of abdominal section. —(*N. Y. Med. Record*, April 10, 1886.)

Rapid Dilatation of the Cervix Uteri for Dysmenorrhœa and Sterility.—This was the title of a paper read by Dr. A. H. Goelet before a recent meeting of the section in Obstetrics of the New York Academy of Medicine. In the paper the author set forth his views concerning the indications for the operation and the method of performing it. The indications were—1st. Dysmenorrhœa constant and severe where stenosis, with obstruction, is present ; this includes flexion with obstruction. In these cases the pain is relieved by the flow ; it sometimes becomes more pronounced after marriage. 2nd. It is indicated in cases of acute flexion, where the probe can be easily passed after the proper direction of the canal has been ascer-

tained; there is no actual obstruction—the dilatation is done to overcome the flexion. 3rd, It is indicated where little or no flexion exists and there is only slight obstruction, the passage of the sound through the internal os is attended by pain, and there is no other cause of the dysmenorrhœa and sterility. 4th, It is indicated in a class of cases which give a history of no inconvenience, but sterility exists and dysmenorrhœa, at first only slight, gradually increasing in severity; the sound passes without pain until the fundus is reached, and an albuminous discharge exudes from the os. In these cases endometritis did not exist previous to marriage, but the congestion consequent upon that state has lessened the calibre of the uterine canal and increased the secretion from the uterine cavity. Complete dilatation, if maintained, will alone cure some of these cases. The proper time for performing this operation is a week or ten days after the cessation of the menstrual flow, and much can be done by preparatory treatment to favor a good result. The mode of performing it consists in anæsthetizing the patient, exposing the cervix through a speculum, introducing a sound, first to ascertain the direction of the canal, fixing the cervix, drawing it down slightly, introducing the dilating instrument, which usually goes through the internal os with a jump, making it evident that it has entered the uterine cavity, and then applying gentle pressure to the handles of the instrument until they are brought together and the required amount of dilatation has been effected, usually the full extent of the instrument. If the dilator does not pass the internal os with a moderate amount of pressure, introduce the applicator *repeatedly*, armed with cotton, which will increase the size of the opening so that the instrument can be introduced *without* force. When the handles have been brought together they should be held for a few moments, then removed, and a Hank's dilator introduced, to be followed by the applicator. This done, a tampon of boro-glyceride is applied and the patient put to bed. On the following day introduce a stem made of hard rubber, slightly curved, tunnelled, and perforated in the centre, and for a week this is to be removed daily, cleansed, and replaced, when it can be removed permanently, and the patient allowed to get up.

Dr. Goelet regards the operation as perfectly safe and effectual, if done properly, and in eighty cases it has not failed in a single instance to cure dysmenorrhœa. The following conclusions were reached :—

1. Rapid dilatation is a perfectly safe and justifiable procedure.

2. If a stem be used in the after-treatment, recontraction does not follow.

3. The operation is demanded by the following conditions : 1st, Marked stenosis, with or without flexion. 2nd, Acute flexion, without actual stenosis or obstruction. 3rd, Slight stenosis shown by the passage of the sound, and dysmenorrhœa and sterility existing without other cause. 4th, Moderate endometritis, acquired, with narrowing of the canal and lack of free drainage for the discharge.

Circumscribed Peritoneal Dropsy simulating Ovarian Dropsy.—At the Baltimore Academy of Medicine, on 2nd March, 1886, Dr. H. P. C. Wilson reported the case of a married woman, aged 37, the mother of seven children. On admission to hospital, she had a prominent fluctuating tumor of the lower abdomen ; dullness on percussion to two inches above the navel, also in either groin ; a clear note in both lumbar regions. The tumor was round and prominent, and was diagnosed to be ovarian. Change of position did not change the area of dullness. No tenderness of the abdomen. Uterus free in pelvis ; measured three inches. An incision was made into abdominal wall and through into the peritoneum, when immediately a gush of greenish-yellow fluid escaped. One and a half gallons flowed away. On looking through the opening, a solid body $9\times6\times3$ inches was seen. A large quantity of recent lymph and adhesions everywhere ; uterus and ovaries normal, but touch and sight did not reveal the true nature of the tumor till it was lifted out of the cavity, when it was found to be made up of coils of intestine agglutinated with lymph. It was so firm and solid that at first it was hard to believe that it could be made up of coils of intestine. It was not adherent to other viscera, but seemed free in the peritoneal fluid. The mass was returned, and the abdominal wound closed

and dressed as after ovariotomy. The case did well, and on the 16th day the woman was out of danger.—*Philadelphia Medical News*, March 27, '86.

Readers of this journal may remember the case reported by myself in the number for June, 1885. In this case the encysted collection was from tuberculous inflammation, and the patient died six weeks after the operation, of general tuberculosis.

Oöphorectomy for the relief of Hystero-Epilepsy, by Dr. T. A. Reamy of Cincinnati.—The great value of this operation in the disease mentioned has been amply demonstrated, although not always successful. On this point Dr. Reamy's case, as reported, is too recent to be of any value, but its history is of importance, as showing the value of chloral enemas in controlling certain symptoms after the operation. On the third day, tympanites and vomiting became marked. These symptoms were more severe on the fourth day, the vomited matters being green. The pulse was 110, very feeble, and the patient very restless. The rectum was now washed out with salt and water, and then fifty grains of chloral thrown in. In less than thirty minutes she was asleep, and slept for five hours. When she awoke, all the symptoms were improved. On the fifth and sixth days the chloral enemas were repeated. The vomiting recurred but once after the first enema of chloral, and recovery was uninterrupted thereafter. In the course of his remarks, Dr. Reamy referred to several cases of obstinate vomiting of pregnancy successfully treated by enemas of chloral.—*Phila. Med. News*, Feb. 27, '86.

Correspondence.

DETROIT, June 4th, 1886.

To the Editor of the CANADA MEDICAL & SURGICAL JOURNAL.

DEAR SIR,—Common as are the number of cases of malaria or intermittent fever in this section of country, I think the one I wish to report will prove somewhat interesting for two reasons: First, as being of that division called quotidian; and, secondly, from the fact that two paroxysms occurred within the twenty-four hours, making it double quotidian:—

On November 5th, 1885, I was called to see Mrs. M., four

months pregnant with first child, who was complaining of having severe rigors every day at two o'clock in the afternoon, and after passing through the successive stages characteristic of intermittent fever, and having an intermission of about four hours, there came on another rigor or exacerbation at about eight p.m. Towards midnight she became cool, and would fall into a comfortable sleep, and awaken in the morning feeling fairly well, when the thermometer would register about 99°F. in the mouth. The rigors were so distinctly marked, and occurred with such regularity, that the diagnosis was very easy, and the case most interesting from its being so well marked and rare a form of intermittent fever. Proceeding in my therapeutics as is usually the case in periodic fevers, I gave quinine bisulphate in 5-grain doses, repeated every three hours, and doubled the dose two hours before each exacerbation. After three days under this treatment, I found the evening rigor had disappeared, but the afternoon one persistent, but not so severe. In five days from commencement of treatment all rigors had ceased, and patient felt quite well and able to perform her household duties. I ordered quinia to be continued thrice daily for a week, and my patient fully recovered, to remain quite well until I was called in to attend her in her confinment, five months later, when she was delivered of a fine healthy girl. In connection with the latter, I may add that her confinement was a very quick and easy one, and her recovery would have terminated without a bad symptom had not malarial poisoning interfered and kept her back four or five days. Quinine proved my friend once more and all ended favorably.

Very truly yours, W. G. Henry.

New York, June 21, 1886.

The American medical profession generally has, rightly or not, the reputation of resorting to methods to get "business" which the members of the same profession in other countries think unprofessional and undignified. Such an impression could scarcely prevail if all American medical societies were as jealous of their honor and dignity as the County Medical Society of

New York recently showed itself. It was on the event of a paper to be read by one of its members, entitled "Saccharine, a new Chemical Preparation." The reader of the paper, a well-known and respectable member of the Society, in his opening remarks, made the statement that the preparation had been patented. The remark had scarcely escaped his lips when one of the members rose and called the reader to order for bringing before the Society a drug that had been patented. Chapter XVI of the Society's by-laws was read by the chair as the only guide in such cases, and he ruled that it did not apply in the present instance, as the reader, so far, had not said anything of a laudatory nature, and his object might be to condemn the preparation. The protesting member appealed from the decision of the chair, and asked that the Society be allowed to vote upon the question. This was almost unanimous against the reading of the paper.

The gullibility of members of our profession has almost become a bye-word. The latest illustration of this feature in the disciples of Æsculapius was the signing, by several of the most honorable physicians of the city, of a petition to the Health Officer asking him to rigidly disinfect all rags, etc., coming into the port. It would now appear that the petition emanated from the Health Officer himself, and what adds a strong tinge of suspicion to the whole affair is the circumstance that an intimate friend of his has lately invented a new method of disinfecting rags. This method has the advantage over all others in that it is a prolific source of dollars for the pockets of the inventor, while it is not at all of a murderous nature to the poor tiny creatures that find a home in the cast off effects of mankind. That the latter feature should not commend itself highly to the public shows what an unfeeling and selfish mass of humanity the public is.

The hydrophobia scare in New York and surrounding country, to which I referred in past communications, has recently been the subject of an able and forcible paper by Dr. E. C. Spitzka, a profound and original observer, and a well-known neurologist of this city. Through the kind courtesy of Dr. Spitzka, I have in my possession the advance sheets of the paper. The author, while not denying the existence of a disease known as hydro-

phobia, communicable from the dog to man, expresses a very strong doubt that such a case has occurred in this country within the past few months in spite of the many cases reported by the secular press. He has sifted the evidence of all the reported cases, presenting a picture resembling true hydrophobia, with the perspicacity and astuteness of a legal mind, and has arrived at the conclusion that they were spurious, merely of a nervous nature, induced by the sensational and horrifying accounts published in the New York papers. Some of the author's remarks are extremely caustic, and exhibit a vim of sarcasm, reminding one of the English classic authors in the days of Dryden and Pope.

A "Pasteur Institute" has been organized in this city, and is now ready to receive contributions. I believe I am doing that institution no injustice when I say that the more the hydrophobia scare can be created in the community, the better it will flourish. It rests for the present on two foundations: First, on a rabbit brought over from Paris which had been inoculated by Pasteur, and which died on the way over or shortly after its arrival; and secondly, on the allegation that genuine hydrophobia exists in and near New York city. About the defunct rabbit there is very little to be said; about the alleged existence of hydrophobia, a great deal. The following are a few of Dr. Spitzka's conclusions: 1, There is, at present, no proven epidemic of hydrophobia either in New York city or in its vicinity. 2, A number of deaths have occurred from spurious hydrophobia (lyssophobia) in New York city and its vicinity during the past nine months. 3, The agitation of the subject of Pasteur's method of preventive inoculation, for hydrophobia, and other accompanying strained accounts of the sufferings and death from that disease, are responsible for those deaths. 4, The means to be adopted to prevent future outbreaks of spurious hydrophobia is to muzzle the dogs, to dam up the torrents of ink flowing from the pens of hasty investigators within appropriate receptacles, and to exclude sensational publications from the household.

With the approach of the summer months, a very noticeable

decrease in the activity of the medical societies is observed. Many have already closed their doors for the summer, and those that have not display a languor and lassitude more characteristic of periodicity than the hot weather that we, so far, have had. Notwithstanding this malaise of the medical profession, a new society for the "prevention and treatment of venereal diseases" has recently been incorporated, with some of New York's leading medical men and laymen forming the board of directors. The objects and advisability of such a society I must leave over for my next communication.

H. N. V.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Epithelioma of Tongue—Excision performed by a modification of Nunneley's method—Recovery.—(Under the care of DR. RODDICK.)

(Reported by DR. H. S. BIRKETT, House Surgeon.)

Wm. B., aged 43, laborer, was admitted to the Montreal General Hospital 4th January, 1886, to receive treatment for an ulcer on the tongue. Family history: His father died at the age of 47 years from cancer of the tongue; his mother died of dropsy; one sister and one brother died of phthisis; one brother died at the age of 20 years from some affection of the stomach; has two brothers, aged 30 and 35 years, enjoying good health. The patient has enjoyed the best of health until the present trouble; there is no specific history; habits intemperate; smokes very much, using a short clay pipe, and carries it on the right side of mouth. About ten months ago, patient noticed a small, hard pimple upon under surface and right side of tongue, about three-quarters of an inch from the tip. This subsequently broke, and an open sore remained. Suffered from a darting, stabbing and intermittent pain, extending from the tongue along the right side of face. The pain was severe enough at times to prevent him from swallowing, talking, or even sleeping at night; sense of taste not affected; slight increased salivation. Received

specific treatment at the out-door department of the hospital for five months, but without much relief. For the last month has had no treatment whatever; has lost flesh and become much weaker.

On admission.—Patient is noticed to be a tall man, somewhat emaciated, but not cachectic; no evidences of specific disease; does not suffer in the least from the ulcer on his tongue. The latter is a superficial ulcer, about the size of a split pea, on the under surface of the tongue, three-quarters of an inch from the tip. It is irregular in outline, purplish in color, and a small slough at the bottom is observed. From the posterior part of ulcer, a superficial fissure, one-quarter of an inch in length, is seen, and extends round the border to the dorsum of the tongue. Immediately behind this is a second similar fissure, one-eighth of an inch long, and a third one extending anteriorly from the ulcer. The tissues about the ulcer are hard, and indurated to a considerable extent in all directions; there is little, if any, pain; no carious or broken teeth found in either upper or lower jaw of the right side; submaxillary and sublingual glands slightly enlarged and painless. Microscopic examination of the secretion from the ulcer shows the presence of epithelial nests, and subsequent examination of sections of the ulcer proved its epitheliomatous nature. Heart and lungs give negative results on examination. Urine 1025; no sugar; no albumen. To exclude the possibility of the disease being syphilitic, 20-grain doses of iodide of potash are ordered to be given three times a day.

Jan. 26th.—No material change being produced by the iodide of potash, operation for removal of the tongue was performed to-day. Patient being etherized, a mouth-gag was introduced, and a silk ligature passed through tip of tongue. With a pair of scissors, the tongue was loosened from its attachments to the floor of the mouth and drawn well out. A sub-mental perpendicular incision two inches in length was next made, and through this the chain of the écraseur was introduced into the mouth and placed securely around the base of the tongue. The entire organ was in this way removed, leaving the smallest stump possible. After its removal, a spurting vessel on the left side

of the root of the tongue gave some trouble. This was ligated with silk, when all hemorrhage ceased. A silk ligature was next put through the stump of the tongue, and secured outside the mouth ; sub-mental incision brought together by two silk sutures and a single drainage-tube of medium size drawn through it. Wound dressed with iodoform and jute, while a mixture of equal parts of iodoform and boracic acid was dusted on the stump. At 6 p.m. the patient was found to have rallied from the operation very well ; no pain, and feels comfortable. Complains only of feeling thirsty. Moderate amount of oozing ; wound and stump re-dressed ; allowed ice only by the mouth. At 8 p.m., temperature 102.5° ; pulse 112. Ordered four ounces beef juice and peptonized milk alternately every four hours per rectum. 27*th*—Slept well after 4 a.m. ; slight pain under jaw ; no thirst ; submental incision dressed and powder blown in on stump, which was previously irrigated by carbolic lotion 1–120 ; temperature 98½° ; pulse 112. 28*th*—Slept all night ; slight pain under lower jaw ; slight bloody discharge ; dressed as usual ; temperature 98° ; pulse 88. 29*th*—Pain under jaw absent ; rests well ; sub-mental incision quite united ; discharge quite sweet ; temperature 98° ; pulse 94. 30*th*—Patient still in good spirits, and has nothing to complain of ; mouth irrigated ; discharge sweet ; sub-mental sutures removed ; boracic acid blown in on stump, which looks very well ; patient allowed to sit up.

Feb. 2*nd*.—Drainage tube removed ; stump looks healthy ; discharge small in amount and quite sweet ; temperature and pulse normal. 3*rd*—The enemata of peptonized milk and beef juice are discontinued, milk and beef juice by the mouth being substituted, as the patient swallows well ; bowels moved to-day ; stump granulating well ; ligature removed from tongue. 12*th*—Discharged from hospital, the stump having almost entirely healed ; general condition much improved ; a gland which was slightly enlarged at time of operation is much smaller. The patient can be readily understood when speaking.

June 24*th*, '86.—The patient was seen to-day and the parts examined. The stump has a healthy look, and is soft to the feel,

no induration whatever being present. He speaks remarkably well, and is in perfect health, having been engaged at his trade almost ever since his discharge from hospital.

Reviews and Notices of Books.

Lectures on Syphilis. Delivered at the Chicago College of Physicians and Surgeons.—By G. F. Lydston, M.D., Lecturer on the Surgical Diseases of the Genito-Urinary Organs, College of Physicians and Surgeons, Chicago, &c. Chicago: A. M. Wood & Co.

This little volume, which, by the way, has been dedicated to our esteemed friend, Dr. Joseph W. Howe of New York, a former preceptor of the author, consists mainly of a course of lectures originally published in the *Western Medical Reporter*. The subject of syphilis is treated in a very plain and practical manner, and the book will be found especially valuable to the student.

How we Treat Wounds To-day. A Treatise on the subject of Antiseptic Surgery which can be understood by Beginners.—By Robert T. Morris, M.D., late House Surgeon to Bellevue Hospital, &c. New York and London: G. P. Putnam's Sons.

This is a spicy little book, written in the characteristic free-and-easy style of the true-born American citizen. Elegance is sacrificed to conciseness, the sentences being short and pithy, but the meaning always unmistakable. The author is, of course, an ardent admirer of Lister, and thinks that he has given to the world a better means for preventing suffering than has ever before been given by any one man. All the various antiseptic methods and apparatus are described, and their several plans of application. He makes a clear comparison of past and present surgery. Thus, speaking of Bellevue Hospital, of which he was at one time house surgeon, he says: "The profuse suppuration to which we had been accustomed disappeared as if by magic, and instead of spending several hours daily in changing dress-

ings, we employed only a few minutes in that sort of work, the number of operative cases being at the same time very greatly increased. Patients became enthusiastic, and brought friends for us to operate upon, etc. The wards lost the old-time hospital odor. From a reign of terror we came to a sort of millenium as regards microbe invasion, and the micro-organism and the wound lay down in peace together, with a good antiseptic dressing between them."

The author prefers the bichloride of mercury as an antiseptic to carbolic acid, but speaks of the danger attending the free use of the former, having caused, in one case, alarming toxic symptoms. He applies Lister's protective to all wounds. The directions given for the preparation and application of antiseptic dressings are easily understood, and could be readily carried out even by one who has never witnessed an antiseptic operation.

On the Suprapubic Operation of Opening the Bladder for the Stone and for Tumors.—By Sir Henry Thompson, F.R.C.S., &c. London: J. & A. Churchill.

Anything from the prolific pen of this very distinguished surgeon is ever welcomed by the profession. Fortunately, Sir Henry is anything but a selfish man, his greatest pleasure being, apparently, to disseminate as rapidly as possible any new facts that are born of his vast experience. Hence, for many years he has been in the habit of treating the profession every few weeks to some precious contribution to the literature of his own special subject. There is this to be admired about him also, namely, that he is ever ready to take a hint and to give the methods of others a fair trial. Thus Bigelow's rapid lithotrity method was, after a time, actually championed by our author. So, now, with the suprapubic operation for stone. Thompson was at one time strongly opposed to it, but having of late become convinced of its efficacy through the writings and experiments of Peterson, Perier, and others, he is now one of its strongest advocates.

The little book before us gives the history of this operation and the reasons for performing it, together with a description

of the author's method of performing it (which, by the way, is to be found in the "Retrospect of Surgery" published in the June number of this journal). The histories of eight cases are also appended, showing one death after operation. The book contains, besides, fourteen woodcuts. To the teacher, and hospital surgeon especially, the work is invaluable.

The Surgical Diseases of Children.—By Edmund Owen, M.B., F.R.C.S., Surgeon to the Hospital for Sick Children, Great Ormond Street, London. With 4 chromo-lithographic plates and 85 engravings. Philadelphia: Lea Bros. & Co.

Mr. Owen, in this number of the series of clinical manuals, embodies the results of his experience in a great metropolitan field for the study of infantile disorders. Chapters are devoted to all the common and a great many of the uncommon diseases, deformities and malformations which may call for the surgeon's assistance. These are treated of in a concise and practical manner, and everywhere the matter of treatment receives a full share of attention. Every general practitioner having much to do with family practice will be glad to have this manual for reference in their children's cases, which so often test his diagnostic skill and therapeutic ability.

Diseases of the Spinal Cord.—By Byrom Bramwell, M.D., F.R.C.P. (Edin.), Lecturer on the Principles and Practice of Medicine, Extra-Academical School of Medicine, Edinburgh, &c. With 53 colored plates and 102 fine wood engravings. Second edition. New York: William Wood & Co.

Those best able to judge look upon this treatise on the spinal cord as one of the very best extant by a British writer. The complicated problems of the disease-processes in this very complicated organ are very clearly studied out, and the explanations are made with remarkable clearness and lucidity. With the first edition we have long been familiar, and find that it is a decided favorite amongst advanced students. It is characteristic of the enterprise of the publishing house that such an expensive

and valuable book has been added to their cheap series of standard medical authors. This alone is worth half the year's subscription.

A Reference Hand-book of the Medical Sciences, embracing the entire range of Scientific and Practical Medicine and allied Science. By various writers.—Edited by Albert H. Buck, M.D. Volume II. New York: Wm. Wood & Co.

We take much pleasure in drawing attention to the appearance of the second volume of this large work, which covers the ground from C A T to E Y E. From the high character of the articles contained in the inaugural volume, we were led to expect much from those which should follow. We may truly say that a careful examination of the merits of the present number shows that the same standard is fully attained. The general excellence of the various contributions is marked, and many of the separate articles are of unusual excellence. It is surprising to find that, in such an ambitious work, covering an immense field, hardly a subject can be looked for without being found in its right place, and carefully and fully treated by some experienced and competent writer. A large number of new contributors are enrolled upon the list, a glance at which would be sufficient to show the quality of those engaged in the work. Amongst these, the following Canadian names are to be found, viz., Drs. Buller, Bryce, Mills, Stewart and Wilkins. We hope that a large number of our readers are, or will become, subscribers to this work. It is by far the most comprehensive, reliable, and useful cyclopedia of reference on all medical subjects with which we are acquainted.

Urinary and Renal Derangements and Calculous Disorders. Hints on Diagnosis and Treatment. By Lionel S. Beale, M.D., F.R.S. and F.R.C.P., &c. Philadelphia: Presley Blakiston, Son & Co.

The more extensive works of Prof. Beale upon urinary affections and upon the microscope are so well known that this smaller volume will meet a ready acceptance from such a high authority. It deals with all the more modern views concerning the pathology

of the urine, and discusses carefully the subject of dietary and medicinal treatment in these important and common ailments. It is a book which will be of great assistance to those engaged in seriously considering these daily-occurring problems with a view to practically carrying out their solution in the interests of their patients.

Books and Pamphlets Received.

A Compend of Pharmacy. By F. E. Stewart, M.D., Ph.G. Philadelphia, P. Blakiston, Son & Co.

Diseases of the Digestive Organs in Infancy and Childhood, with Chapters on the Investigation of Disease and on the General Management of Children. By Louis Starr, M.D. Philadelphia, P. Blakiston, Son & Co.

A Manual of Dietetics. By J. Milner Fothergill, M.D., Edin. New York, Wm. Wood & Co.

Medicine of the Future. By Austin Flint, Jr., M.D., LL.D. New York, D. Appleton & Co.

A Treatise on the Diseases of the Nervous System. By William A. Hammond, M.D. Eighth edition. New York, D. Appleton & Co.

Diseases of the Stomach and Intestines. A Manual of Clinical Therapeutics. By Prof. Dujardin-Beaumetz. Translated from the fourth French edition by E. P. Hurd, M.D. New York, Wm. Wood & Co.

A Manual of Midwifery. By Alfred Lewis Galabin, M.A., M.D. Philadelphia, P. Blakiston, Son & Co.

Coca, Cocaine and its Salts: Their History, Medical and Economic Uses, and Medicinal Preparations. By Wm. Martindale, F.C.S. London, H. K. Lewis.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, April 2nd, 1886.

Geo. Wilkins, M.D., 2nd Vice-President, in the Chair.

Primary Cancer of Pancreas, with secondary deposits in other organs.—Dr. Rowell exhibited the specimen, and Dr. Armstrong related the clinical history of the case:

Mrs. M., aged 80, widow, enjoyed good health until three years ago. Father and two brothers are said to have died of cancer. Admitted to Western Hospital in December, 1885, suffering from loss of appetite, pain after eating, and vomiting. On examination, a hard, round, circumscribed lump, about the

size of an orange, was found occupying the epigastrium, just over the region of the pyloric end of the stomach. As little was to be gained from medical treatment, a mixture containing bismuth, hydrocyanic acid and mucilage was prescribed, and she was removed by her friends to her home. It was learned at the time of her death that since her removal from the hospital the vomiting had continued persistently, the most bland liquids, even water, being immediately regurgitated. She had also suffered much pain, for which she had taken morphia pills. Nothing passed bowels for two weeks before death, and she became distinctly jaundiced. At the post-mortem examination, 36 hours after death, only the abdominal cavity was examined. On opening the abdomen, the omentum was found adherent to the anterior abdominal wall. Liver very much enlarged, extending down to level of umbilicus, and containing several large cancerous nodules. Gall-bladder much distended, containing eight ounces of bile and a dark-colored gall-stone the size of a cherry. Upon raising the liver, the head of the pancreas was found to be occupied by a cancerous mass, and the surrounding tissues were infiltrated and adherent to it. The walls of the stomach were free from disease. Complete obstruction of the duodenum occurred four inches from the pylorus, caused by pressure of this cancerous mass, together with the adherent and infiltrated tissues about it. A number of the mesenteric glands were also involved. Intestines empty. Spleen slightly enlarged.

New Method for the Relief of Ruptured Perineum.—Dr. Trenholme read a paper on this subject, exhibiting drawings of the new method, as follows :—This disease must be as old as parturition itself, and yet, beyond the adjustment of the parts, binding the knees together, in recent cases no really successful advance had been made for its cure till the late ever-lamented Dr. Sims introduced his silver suture. The operations of Baker Brown and others were not of any real value, and perhaps the cause or nature of failure was not fully brought out till Emmet's paper upon this subject was given to the world. Now, I do not propose to go over the many points connected with this trouble and the operations attempted for its cure. How much progress

has been made can hardly be conceived of by those who have graduated during the last twenty-five years. One of the best and most esteemed surgeons of this city, and, I might say, of this country, endeavored to dissuade a confrere from attempting the operation, stating that "it was sure to be a failure." Not only did he do this, but used his endeavors to prevent the lady from having the operation performed. Thanks, however, to the silver suture and the courage of the operator, the operation was successfully performed and the patient cured. This, occurring in our good city, speaks volumes. For my own part, I think the evils resulting from severe lacerations are very great, and if anything I may say will direct more attention to the prevention of these evils, I will be satisfied. I feel confident that the sum-total of the sorrow and misery arising from this cause vastly exceeds our conception. It is a recognized factor in the causation of subinvolution of the vagina and uterus, and I am persuaded its results are not limited to these organs, but that the tubes and round ligaments share in the same mischief. It is a fruitful cause of retro-luxations of the uterus and prolapsus of bladder. Of all the marital misery and personal distress I need say nothing; these, of course, vary with the peculiarities of individual cases and the extent of the disease. I will not speak of the well known preparation of the patient required, especially in extensive lacerations; you all know as to this and the after-treatment also. There is one remark I wish to make as to what is known as the perineal body. Some writers have made light of its existence, because its anatomy and relations are not sufficiently definite to merit, as they think, this appellation. That every uninjured perineum has such a body is unquestionable, and the restoration of this body is *the one* object of perineoraphy. An operation is successful or unsuccessful, according as to whether this end of the operation is or is not attained—without it the natural support of the pelvic viscera is impossible. Not only is there apt to be hernia of the anterior rectal wall, but prolapsus of both bladder and uterus—and this in the order I have given them. The best success heretofore has followed Emmet's operation. His conception of the trefoil character of

the surfaces to be brought together is based upon a right conception of the anatomy of the parts. The perineal body being the central, and the lateral surfaces the outside leaves of the trefoil, each sulcus represents the lateral borders of the vagina and rectum. Perfect union of these surfaces leaves but little more to be desired. What remains to be attained is the object of what I now offer. In the first place, the loss of any tissue is to be avoided, and sure union by first intention the desideratum to be attained. My operation is based upon the recognition of the immense value of the perineal body. I denude the surfaces to the fullest extent of the parts injured. This denudation is accomplished by the removal of the covering of the parts to be denuded—*i.e.*, the cicatricial surface in *one* piece. For this purpose the first incision is made at the upper part where the edge of the skin coalesces with the cicatricial surface—(the dotted line in sketch No. 1 shows this) ; the knife is entered at the highest point on the right side, and the incision brought down to the lowest part of the fourchette, when it is met by a similar incision on the left side. The lowest part of the angle is then seized with the forceps and carefully dissected upward, taking special care to remove the whole surface without incising the flap ; this dissection is carried on till the surface represented by the original wound is uncovered. This flap, when raised with the hook, is seen in drawing No. 2. The next step is the introduction of the shield-sutures (and here I would say a word in favor of the catgut suture which I adopt). It is by far the best, as it gives the greatest possible extent of surface to surface—much greater than can be secured by the interrupted or any other suture. Two deep sutures usually suffice, and these —whether silver, silk, or catgut—are passed in and secured by clamp shot upon an ivory shield. The first suture should be inserted low down, and about three-quarters of an inch from the edge of the wound. It must be passed under the denuded surface so as not to apear, and brought out on the opposite side at a point corresponding to that of insertion. The second deep suture is similarly introduced higher up. The last deep suture should catch the flap, and the interrupted suture will do for this.

The edges of the wound are coapted by horse-hair sutures, and the upper part of the flap and around on the right and left side are secured by catgut sutures; this leaves the united surfaces in the shape of the letter T. The vaginal surface is perfectly covered, and in no way can a drop of fluid enter the wound or interfere with union by first intention. There is very little pain, inasmuch as the deep shield-sutures allow of distention. Interrupted sutures should not be used. Where the rupture extends into the rectum, the flaps are carefully brought together by a running catgut suture, and the operation completed as in this case. The objection to all other operations was that it left the vaginal incision open, which sometimes, therefore, interfered with union by first intention. By my method this is now impossible, and when catgut is used the results of the operation leave absolutely nothing more to be desired. The following points are gained: Perfect union, perfect restoration of the perineum, no loss of substance, and no after fever worthy of the name. Sketch 3 shows the condition of the parts at the completion of the operation.

Dr. Wm. Gardner said that, as a rule, extensive lacerations of the perineum were mischievous, and produced symptoms, yet he had seen many exceptions to this. In numbers of cases, even where some fibres of the rectum have been torn, no inconvenience followed, due, no doubt, to the integrity of the vaginal walls and to individual peculiarity. He had also seen procidentia uteri in virgins and in multiparous women, where there was no rupture at all. The principle of the method advocated by Dr. Trenholme was not new. Hart and Barber had described a similar operation, but denuding in two segments; and Tait, five or six years ago, proposed an operation similar to Dr. T.'s, with the exception of introducing the sutures somewhat differently. Dr. Gardner had performed this (Tait's) operation twice, but was not favorably impressed with it. Convalescence was not so satisfactory as when he had performed Emmet's operation.

Dr. Armstrong thought that the different degrees of injury resulting from laceration of the perineum in different cases de-

pended upon the character and extent of the tear. He doubted whether a simple tear of the so-called perineal body, which consisted principally of cellular tissue and skin, was followed by much harm. There was good evidence to the contrary. The evil results charged to laceration of the perineum only obtained when either the pelvic fascia was torn or when the muscular floor of the pelvis was injured, either by a separation of the levator ani muscles in the middle line, or when one or both of these muscles were torn away from their origin from the rami of the pubes or from the ischial spine. This fact is pretty clearly established by Emmet, by Dr. Schatz of Rostock, and by Dr. B. E. Hadia of San Antonio, Texas. The best operation is that which the most perfectly restores the parts to the condition in which they were before the injury was sustained. Emmet's new operation has yielded good results in the Western Hospital. He was not aware that, so far, any attempt had been made to unite the divided muscles in the median line or to the pelvic fascia.

Lanolin.—Dr. Reed made a few remarks on this drug, a new basis for ointments, introduced by O. Liebreich, obtained from the fat of the keratin tissues, and principally from wool. The very strong recommendations of this cholesterine fat in the articles in the *British Medical Journal* for February would cause it to be extensively tried by the profession. The advantages of rapid absorption and ready miscibility with aqueous mixtures were in a measure confirmed. Manufacturers were preparing for a great demand, and an abundant supply at a moderate price would soon be on the market. A specimen was passed round.

Operation for Intra-uterine Fibroid—Accidental Inversion of the Uterus and Rupture of the Perineum.—Dr. Gardner reported the case as follows: Mrs. —, childless, was sent to him from Ontario. She had had severe hemorrhages for the past five years; of late they had been very excessive, and produced great blanching. On examination, a tumor was found about the size of a child's head, and completely filling the vagina and uterus. *Operation*—The tumor was fixed by an assistant and

removed piece by piece by means of scissors, fingers and serrated scoop. Towards the end of the operation, whilst dragging strongly on the remaining portion of the tumor it suddenly gave way, tearing the perineum and inverting the uterus. The uterus was easily replaced, but sutures were not applied to perineum in order to facilitate irrigation and drainage of the uterus. For this purpose Dr. Gardner always employs the double tubes fixed to the cervix. Convalescence proceeded very satisfactorily for five days, when the temperature rose and diarrhœa set in. This condition persists in spite of treatment. It is feared she has amyloid disease of the liver and other organs, the liver being now enlarged and smooth. She is also passing large quantities of urine containing albumen.*

Stated Meeting, May 1st, 1886.

T. G. Roddick, M.D., President, in the Chair.

Tuberculosis of the Tongue.—Dr. Stewart exhibited a woman, aged 28 years, who has been complaining for over four months of cough, purulent expectoration, night sweats, loss of flesh, etc. She has lost a brother and sister from pulmonary consumption. Her father and mother are still living, and enjoying good health. When she first came under observation, three months ago, there was distinct evidence of consolidation of both apices. This condition still continues. The patient is hoarse, and complains of pain in the larynx and also in the throat when swallowing. Dr. Major, who kindly examined the larynx, found a tuberculous nodule about the size of a grain of wheat in the inter-arytenoid space. The tip of the tongue is superficially ulcerated to the extent of about a five cent piece. From the centre of this ulcerated surface a fissure extends into the substance of the tongue to the depth of about a quarter of an inch. The tissues immediately surrounding this fissure are hard and nodular. There is no pain on pressure, however, neither is there any discharge from the ulcerated surface of the tongue. Shortly after the sore on the tongue was noticed, the patient experienced

* She died a week later from pleuro-pneumonia.

a severe pain in it, which continued to increase in severity up to the time when she first came under treatment, when it had reached such an exquisite degree that she found it almost impossible to eat or even to speak. The local application of iodoform quickly relieved the pain, but otherwise it does not seem to have had any influence over the course of the local trouble. Lately, a half per cent. solution of papayotin in equal parts of glycerine and water has been applied several times daily, the object being to directly influence the tuberculous infiltration, from the well-known properties that this drug has in dissolving albuminous tissues. The case is undoubtedly one of typical tuberculous ulcer of the tongue. Although the secretion from the ulcer has been examined on two occasions, no bacilli have been found.

In reply to a question raised by Dr. Shepherd as to the influence of iodoform, when used as a local application, in producing pneumonia,

Dr. Major stated that he had used the drug extensively in nasal and laryngeal disease for many years, and he had not, thus far, encountered any untoward result.

Dr. R. J. B. Howard had seen iodoform freely used in Vienna in cases of excision of the tongue, and there it is said to be free from danger.

Eversion of the Laryngeal Ventricles.—Dr. Major presented a case of eversion of both laryngeal ventricles in a male aged 27. The case had been under observation and treatment for over two years, and showed decided improvement. A tuberculous condition was present, as evidenced by lung signs and a local development in the post-laryngeal wall. He referred to a case of complete eversion of the right sacculus, which had been demonstrated at the throat clinic of the Montreal General Hospital in April, 1884, occurring in the person of a syphilitic subject, where the ventricle was completely returned under treatment. Reviewing the literature of the subject, allusion was made to the fact that in the majority of the few recorded cases some dyscrasia was prominent, notably accompanying syphilitic, tuberculous or cancerous disease.

Peculiar Skin Disease of the Feet.—Dr. R. J. B. Howard exhibited a boy, 12 years of age, of healthy family. He has angular curvature, involving the lower dorsal region. First noticed when he was 3½ years old. His feet were first affected in his sixth year. A small "scurfy" spot appeared first on the right foot, and has spread steadily, healing at the centre. When he came to the Dispensary it appeared as a lupiginous patch about 4 inches across, on the right ankle and instep; smaller similar patches existed on the outside of the right little toe and left great toe, at metatarso-phalangeal joint. The patch is covered with a crust or scab of a somewhat papillary appearance. Not tender or painful at any time, and never ulcerated. Dr. Howard brought the case for diagnosis. He thought it was due to some derangement of the spinal cord at the seat of the curvature, as nerves from this region supplied the skin of the feet.

Dr. Shepherd believed it to be a form of lupus.

The President suggested that the parts be poulticed to remove the crusts, and the boy be again brought to the Society.

Compound Fracture of both Legs.—Dr. Shepherd presented a case with the following history:—Edward N., aged 33, sailor, on the 11th of September, 1885, whilst working on his ship, fell through the hatchway into the hold, a distance of twenty feet, breaking both his legs. He was immediately admitted to hospital, and on examination, it was found that he had sustained a compound fracture of both legs about their middle third. The wound in left leg was about two inches long, and the fracture was comminuted. The right leg had the soft tissues much lacerated, the wounds being multiple, the largest some 4 inches long. Large pieces of muscle protruded, and there was much riding of bones. After cleansing the wounds with bichloride solution 1–1000, dusting them over freely with iodoform, and covering them with iodoform gauze and sublimate jute, the left leg was immediately put up in plaster, a window being left opposite the wound, some jute being placed over this and kept in place with a gauze bandage. Owing to the size of the wound and amount of the laceration in the right leg, it was

thought wiser to put it up in a McIntyre splint, after placing the bones in as good a position as possible. The same evening, owing to the large amount of oozing, the external dressings were renewed, but were not again touched for one month, at the end of which time the wounds were found perfectly healed ; the fracture of the left leg was firmly united, but although the extensive wound in right leg had healed, there was no union, so, after rubbing the bones together, it was put up firmly in a plaster-of-paris bandage. From time to time this bandage was renewed, the patient being allowed to move about with crutches. At the present time, seven months after the accident, the patient could walk about without support, and during the next week intended joining his ship. The right leg was still encased in plaster, and although the union was not quite perfect, it was daily improving. There was one inch and a half shortening of the right leg. After exhibiting the patient, Dr. Shepherd remarked that he had now no fear of compound fractures, and that all the cases did well if the wound was thoroughly cleansed with bichloride, dressed with iodoform and jute dressing, and left undisturbed. Of course, if the temperature rose, it was wise to examine and change the dressing. He considered this a case which a few years ago would have demanded amputation.

Dr. R. J. B. Howard said that Esmarch reported a case where there were three compound fractures of the leg, thigh, and forearm. The treatment used was similar to Dr. Shepherd's, and a good recovery followed.

Dr. Johnston exhibited the following pathological specimens:

1. *The Cord and Brain* from a case of non-tubercular cerebro-spinal meningitis in a child. Patient was suddenly seized with severe pain in the head and vomiting. A few days before death ecchymotic spots appeared over the chest and arms. The illness only lasted a week.

2. *The Uterus and Heart* from a case of malignant endocarditis in a patient suffering from puerperal fever. Patient did well for the first twelve days after confinement, when she was suddenly seized with rigors, her temperature running up to 105°. Nothing local was found to account for this. There was no pain

in the abdomen. The heart showed endocarditis, with vegetations over the valves. The uterus showed signs of septic endometritis. There was also a diphtheritic-looking membrane in the cervix and on the inner sides of the labia. There were infarcts in the kidneys and spleen, but no pyæmic abscesses.

Dr. J. C. Cameron read a paper entitled

Notes on the Determination and Causation of Sex.

By P. W. P. Mathews, LL.D., M.R.C.S.E., Etc.,
Dominion Coroner for the North-West Territories and Medical Officer of the Hudson Bay Company, etc.

of which the following is an abstract:—

From earliest times, men have been anxious to learn the sex of the fœtus in utero, and for this purpose many quaint methods have been devised. The following aphorisms enunciated by Hippocrates are to this day believed and practised by midwives in the East:

1. If the child be a male, the mother will have a good color; but if a female, a bad color.

2. The male fœtus is usually seated on the right side, the female on the left.

The ancient astrologers directed a drop or two of the mother's milk to be squeezed out upon a clean knife or glass, or upon the finger-nail. If the milk spreads about, the child is a female; if it remains still, the child is a male.

M. Venette, the author of a popular treatise in France, directed that if a son is desired the generative act should be performed when the wind is in the north. Others held that the right testicle secretes female sperm and the left male; others that the right ovary discharges male ovules and the left female, and directed the woman to lie on the right side during coitus if a male child is wanted. This belief still lingers among some of the Hudson Bay Indians.

Pythagoras thought that a vapor descended during coitus from the brain and nerves of the embryo, the grosser tissues being derived from the blood and humors found in the uterus.

Empedocles affirmed that a portion of the embryo was contained in the sperm and a portion in the germ, the child being formed by the union of the two.

Hippocrates taught that conception takes place in the uterus by the mixture of due proportions of the male and female elements, sex depending upon which is stronger.

Aristotle held that the material parts of the embryo are formed by the catamenial blood, and that the male semen imparts the principle of life when the body is formed.

In later times, Descartes and his followers affirmed that a sort of fermentation takes place when the male and female seminal fluids are mingled, a fœtus being the result; while according to the chemical school, the acid male secretion mixing with the alkaline female secretion causes a sort of double decomposition, a fœtus being the precipitate.

In 1667, Ludwig Hamm contended that an immense number of animalcules exist in the semen of all male animals, which contain the perfect rudiments of the future animal, and that the female simply supplies the proper nidus or habitat and suitable nourishment. The discovery of movement in the minute seminal particles seemed to confirm this theory; while some writers went so far as to say that these animalcules are of different sexes and copulate so as to engender male and female offspring.

Thury of Geneva propounded the doctrine that in animals, males are always produced when completely matured ova are fecundated, and females when the ova are less mature. Thus by serving the cow with the bull at the commencement of rut, a female calf is produced; by serving at the middle or end of the rut, a male is ensured. In further proof of his theory, he said that queen-bees always lay female eggs first, and males afterwards. Applying this theory to the human female, it has been argued that if the ovum which is discharged from the ovary at time of menstruation, is impregnated shortly after the conclusion of the menstrual period, a female will be the result; but if impregnation do not take place for ten days or a fortnight, the child will be a male. This rule has been briefly formulated thus: *Female* offspring result from *post-menstrual*, *male* from *præ-menstrual* impregnation.

The relative age of the parents seems to have some influence upon the sex of their offspring. Mr. Sadler, from an investi-

gation of nearly 15,000 cases, concludes that on an average the sex of the child is that of the parent whose age is in excess. In England the husband is usually older than the wife, and the proportion of live-births is 104.7 males to 100 females. Among illegitimate children, the proportion of males is somewhat higher, 106.3 to 100, probably for similar reasons.

Recently, Mr. Starkweather has published a book on the "Determination and Causation of Sex in Man and the Lower Animals," in which he lays down the law that sex is determined by the *superior* parent. In deciding this superiority, numerous factors are to be taken into account, such as temperament, activity, energy, will, intellect, features, color, physique, health and nutrition. This sexual superiority does not necessarily coincide with superiority as generally understood, nor does it necessarily imply superiority in mental and moral qualities. This theory is an expansion and extension of Hippocrates' dictum, that the parent who is physically more vigorous at the time of conception gives his or her sex to the offspring; or, as Cuvier puts it, "To obtain an excess of female offspring, the father should be young and ill-fed, and the mother of mature years and highly fed."

In 1863, Frankenhauser and others propounded the theory that the rapidity of the fœtal heart varies according to the sex of the child, being greater in the female than the male. In 50 cases he succeeded in diagnosing the sex correctly, finding

124= mean male fœtal heart-beat.
144= " female " "

Steinbach followed with 45 successful cases out of 57, finding

131= mean male fœtal heart-beat.
141= " female " "

Devilliers in France and Cumming in Edinburgh denied the truth of this theory, and maintained that the frequency of the fœtal heart-beat depends upon the size and weight of the child rather than upon its sex. As it is usually slower in large and well-nourished children, and as males are generally larger and heavier than females, a slower pulse-rate in males is usually to be expected. Opinions seem to be contradictory respecting the

truth of this theory; my own experience does not corroborate it. One strong argument against it is, that if the pulse-rate of a considerable number of children be taken within one hour after birth, the difference of rate in the sexes will be too slight to admit of any rule being deduced therefrom.

Remarks by DR. CAMERON:

In 1879-80-81 I made some observations which tend to confirm Frankenhauser's theory. McClintock, in the Sydenham Society's edition of Smellie's Midwifery, quotes some observations made by Dr. Frank C. Wilson of Louisville, which are so similar to my own that I tabulate them together as follows:—

	DR. WILSON'S CASES.				DR. CAMERON'S CASES.		
	No. Cases.	M.	F.	*Remarks.*	No. Cases	M.	F.
Fœtal heart-beat, 110-125.	37	35	2	Almost certainly male....	15	15	0
" " 125-130.	15	13	2	Probably "	14	14	0
" " 130-134.	12	8	4	Doubtful-chances of " ...	7	2	5
" " 134-138.	7	2	5	" " female.	15	5	10
" " 138-143.	9	2	7	Probably "	19	3	16
" " 143-170.	26	2	24	Almost certainly "	30	1	29
	106	62	44		100	40	60

The lowest fœtal heart-beat in my series was 98, in a very large male child. From this series of observations, it seems tolerably conclusive that a fœtal heart-beat under 130 is generally diagnostic of a male; over 140, a female. To secure accuracy, the following precautions should be taken:

1. Observations should be made before or in the very early stages of labor, for as labor advances the fœtal heart-beat tends to become more rapid or irregular.

2. Several observations should be made, and their mean calculated, for the painless contractions of the uterus frequently modify the fœtal heart-beat 10–20 per minute.

Many failures in diagnosis may be referred to lack of attention to these precautions.

In discussing this question of sex, much confusion has arisen from the want of clear notions respecting menstruation, ovulation and conception. Menstrual flow and the discharge of a mature ovum from a Graafian follicle are supposed to occur about the same time; hence many conclude that these two processes stand in the relation of cause and effect. Although the question is

not yet definitely settled, evidence is rapidly accumulating to prove that their coincidence is accidental rather than necessary, and that one process may go on independently of the other. Indeed they are essentially opposite in character: ovulation is *progressive*, being the preparation and discharge of ova fit for impregnation; menstruation is *retrogressive*, being essentially a retrograde metamorphosis of the soft decidual nest prepared for a previous ovum. It has therefore been aptly called "the funeral obsequies of defunct and disappointed ova."

Physiologists tell us that after a ripe ovum has been expelled from its Graafian follicle, its germinal vesicle becomes nuclear and approaches the surface. A portion is eventually extruded from the egg in the form of the Polar Bodies, leaving the remainder to form the *female pronucleus*. The ovum then ceases to grow unless speedily fertilized, perishes, and is cast off. But if spermatozoa reach it in time and penetrate its substance, it does not perish; the heads of the spermatozoa detach themselves and become the *male pronucleus*, which fuses with the female pronucleus to form the fertilized nucleus. Conception is said to have taken place, and growth is thenceforth rapid. Morphologically, the male and female pronuclei are closely allied, both being derived from the primitive ova of early embryonic life. In the female, a primitive ovum develops into a permanent ovum, capable of producing a human being; in the male, a primitive ovum breaks up into a number of spermatozoa. That the sex of offspring must be due to the relative properties and powers of these male and female pronuclei is tolerably clear, but to what properties or what powers is not quite evident. The essential points ef Starkweather's theory are the following:

1. The male and female elements share equally in the determination of sex.

2. Sex is determined by the superior potentiality of one or the other.

3. The superior parent or element (at the time of fruitful intercourse) determines the opposite sex in the offspring—cross-heritage, as it has been called.

4. In the great majority of cases, it is possible to prognosticate the sex that will result from the union of certain parents.

5. The sex of offspring is or might be generally within the control of parents.

6. This law holds good for the lower animals as well as man.

He cites numerous life histories in support of his theory, such as Milton, Shakespeare and Sir Thomas More, and dwells upon the well known fact that great men have usually great mothers. He holds that his theory accounts for the small excess of male births among western nations, the marked excess of females among mulattoes, and the temporary large excess of males after war, pestilence, etc. In certain families, too, there has been noticed a remarkable succession of sons in one generation, of daughters in the next, and of sons again in the next. These cases are explained as examples of cross-heritage, the sex being determined by the superior opposites. In the controversy aroused by Starkweather's book, frequent appeals have been made to the experience of stock-breeders both for and against his theory. On the whole, the evidence seems to be against the ability of man to control sex among the lower animals. Yorkshire men, the most experienced breeders in England and probably in the whole world, have no confidence in their power of predetermining the sex of horses and cattle, although it would be very much to their pecuniary advantage to be able to do so, but are confident that they can modify, develop, or eliminate any other physical quality to an almost unlimited extent.

Starkweather's theory is ingenious, and contains much truth, but is yet far from proven. As our knowledge and experience increase we may know more of nature's methods; but it is highly improbable that we will ever gain the power to regulate sex, for such power would be prejudicial to the best interests of the race. During countless ages, the diversity of man's environment, the unceasing struggle for existence, the survival of the fittest and the gradual development of the race have continually, through barbarism and civilization alike, determined those laws of reproduction which were from time to time most conducive to man's welfare. Nature's experience is greater than ours; her wisdom,

patience and unselfishness are greater than ours; her balance more justly equipoised than ours. But though we cannot supplant her, we may learn important lessons by observing her methods. The careful study of sex-formation should throw much light upon the mysteries of heredity, and enable us to foresee and possibly forestall many family taints or predispositions. The knowledge that a grandfather's peculiarities are liable to be propagated through his daughters to his grandsons, should help us to grapple with such diseases as dipsomania, hæmophilia, or gout.

If, in any degree, it be true that the superiority of the parent is a powerful factor in determining the sex as well as the strength of the offspring, it must be equally true that the deterioration of the parent will cause deficiency or deterioration of the opposite sex in the succeeding generations. If, then, the modern craze for the "higher education of *women*" goes on unchecked till their physical powers are sacrificed to so-called mental culture, the prospects for coming generations of *men* will be dark indeed, and Miltons or Shakespeares will be well nigh impossible. But nature's unerring balance eventually rights all things; the enfeebled progeny of weak, neurotic parents inevitably succumb before the vigorous offspring of the healthy and robust, for the fittest must survive.

TORONTO MEDICAL SOCIETY.

Annual Meeting, April 6, 1886.

THE PRESIDENT, DR. CASSIDY, IN THE CHAIR.

(*From our own Correspondent.*)

After reading the minutes of the last meeting, the retiring president gave his valedictory address, which consisted in a summary of the work done during the past year, and redounded much to the credit of the Society.

The election of officers for the ensuing year was then proceeded with, and resulted as follows:—

President—Dr. A. McPhedran.

1*st Vice-President*—Dr. B. Nevitt.

2nd Vice-President—Dr. H. Machell.
Corresponding Secretary—Dr. Cochrane.
Recording Secretary—Dr. Peters.
Council—Drs. Reeve, Graham and Atherton.

A hearty vote of thanks was then tendered the retiring President, Dr. Cassidy, to which the latter made a suitable reply, and the Society adjourned.

Stated Meeting, May 20th, 1886.

The President, Dr. McPhedran, in the Chair.

Dr. Sweetman presented a patient, aged 23, who, eighteen days before, had been struck in the centre of the forehead by a piece of wood thrown from a circular saw, causing a compound comminuted depressed fracture of the frontal bone. Dr. Sweetman trephined the frontal bone close to the seat of fracture, and removed a circle of bone about five-eighths of an inch in diameter; several fragments were also removed, the largest having an external surface half as large as a five-cent piece and an inner surface as large as a twenty-five piece. A very slight puncture was made in the dura mater, and a portion of clot was removed from beneath it. The longitudinal sinus was laid bare, but uninjured. The patient recovered without any bad symptoms.

Dr. Nevitt related a case of compound depressed fracture of the parietal bone, in which the wound had gone on to profuse suppuration before it was seen by the surgeon. On careful examination, the wound was found to contain a portion of the felt hat which the patient had worn, some hair, and a number of fragments of bone; these were removed, and the patient recovered without the slightest symptom of compression or irritation.

Dr. Teskey exhibited a kidney affected with marked amyloid degeneration. The two kidneys together weighed 23 ounces. The subject from whom they had been removed had suffered from prolonged suppurating abscesses. Sections of the kidney, stained violet with iodine and methyl aniline, were also demonstrated.

In answer to Dr. Machell, Dr. Teskey expressed it as his

opinion that patients suffering from amyloid degeneration of organs often improve under favorable circumstances, such as the removal of the suppurating part. The lardaceous matter may be absorbed, but there is hypernucleation of the interstitial tissue which eventually undergoes infiltration and contraction.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Germs and Ptomaines.—In concluding his paper before the French Academy of Medicine, Prof. Peter made the following remarks:—"M. Gauthier has shown that in the dead body, and even in the living, ptomaines are found; these alkaloids, ptomaines or leucomaines, are absolutely toxic; an auto-infection, characterized by hyperthermia, is the result. This theory rids us, at least for a time, of the tyranny of the microbes. If urea, which is an alkali, is constantly formed in our organism, why should there not also be formed an alkaloid in it? It is only a question of degree. Life is a contingent phenomenon; it is a series of partial deaths. It may therefore be said that we carry in ourselves, while living, a portion of our own corpse, but we resist the work of auto-infection by two distinct mechanisms—the elimination of the toxic substance and its destruction by oxygen. We should no longer hesitate between the parasitic doctrines, which are shrouded in dark hypotheses, and this new doctrine, which is as luminous as it is precise, which explains the phenomena of normal and abnormal life."—*Lancet.*

Pilocarpin in Pneumonia.—The Paris correspondent of the *British Medical Journal* tells us that Dr. Humbert Mollière has successfully treated double pneumonia with pilocarpin. The patient, exhausted by dysentery and albuminuria, was attacked with pneumonia in both lungs, and the intestinal disturbance was greatly aggravated. A centigramme of pilocarpin was injected; the respiratory movements fell from 48 a minute to 24, and dyspnœa was much relieved. Four hours later, a fresh injection was made, and was repeated the next

morning; each injection was followed by profuse sweats and salivation, and dyspnœa was greatly relieved. The patient rapidly recovered. In administering pilocarpin, M. Mollière was guided by former experience. An elderly man with uræmia, accompanied with dyspnœa and delirium, who seemed dying, was greatly relieved and ultimately cured by a similar treatment. Dr. Mollière describes another case. A young woman with a comatose form of uræmia and renal lesion, following a cardiac affection, was freed from the comatose condition by injections of pilocarpin.—*Med. & Surg. Reporter.*

Bacteriology.—The rapid advances of bacteriology during the last few years, and the important rôle which bacteria play both in health and disease, give great interest to a sketch of the chief facts which have been made out with regard to these minor organisms, and of the methods of investigation employed in their study, which Mr. Watson Cheyne presents in the July number of the *American Journal of the Medical Sciences.* A knowledge of what has been discovered with regard to these minute bodies is essential for the study of pathology, and for the rational treatment of infective diseases. But it is more especially in the department of preventive medicine that the practical value of these researches is as yet evident. So long as the precise cause of a disease is unknown, the views held as to its origin must necessarily be vague, and the measures adopted against it often either inefficient or excessive. But when the cause is known, and more especially when it can be studied apart from the body, its life history, its habitat outside the body, its mode of entrance into the system, and the best methods of destroying it under various conditions are learned, and the measures to be adopted against it can be made precise and effectual. It is not, however, sufficient for the medical officer of health to know the literature of the subject; he must himself be a bacteriologist, ready and able at any moment to carry out an investigation on bacteria. More especially must he be acquainted with the methods of demonstrating, recognizing and studying these organisms in water, food, etc., with the view of determining in many cases whether these substances are hurtful or not, and also with the view of

ascertaining the exact source and commencement of any given epidemic. It is necessary that the practising physician also should be, to a certain extent, versed in some of the methods, more especially in those of staining and examining bacteria, as, for example, the bacillus of tubercle, in order to enable him to make or confirm his diagnosis. In surgical work, again, more especially in the treatment of wounds, a practical acquaintance with the subject is almost essential. Whatever antiseptic substance be employed, or whatever method of treatment be adopted, the principles enunciated years ago by Sir Joseph Lister must be rigidly adhered to: micro-organisms must be completely excluded from wounds or their active development must be prevented. To do this intelligently, the surgeon must know what are the chief facts with regard to bacteria; while to carry out wound treatment comfortably and successfully, a practical knowledge of the methods employed in laboratory researches is almost essential. The importance of these studies will doubtless become more fully recognized as time goes on, and facilities for their study by students will be provided in every good teaching school, as is, indeed, being already rapidly done in the leading universities in Germany.

Ulcerative Endocarditis.—In an elaborate study of ulcerative endocarditis, in the July number of the *American Journal of the Medical Sciences,* Dr. Byrom Bramwell records fourteen cases in all of which the aortic valve was affected, either alone or in combination, the mitral in six, and the tricuspid in one. In two of the three cases in which well-marked acute croupous pneumonia was present, he detected micrococci in the exudation filling the air-cells of the lung, but he failed to satisfy himself that they were identical with the micrococci in the cardiac vegetations. The frequent association of acute croupous pneumonia with ulcerative endocarditis is a point of great interest, but Dr. Bramwell's observations on this point have not been sufficiently extensive to enable him to form a satisfactory judgment; but his pathological experience clearly shows that during certain seasons acute croupous pneumonia and ulcerative endocarditis are apt to prevail. The detection of micrococci in the

inflamed cerebral meninges, and in the vessels and substance of the cerebral cortex, and the presence of disseminated patches of cerebritis and acute cerebral softening, are very interesting; and afford a satisfactory explanation of the nervous symptoms which are so prominent in some cases of the disease. Mr. A. W. Hare, in response to Dr. Bramwell's request, undertook an experimental investigation to determine the relationship of ulcerative endocarditis to other infective conditions. The results which he obtained, and which are detailed in the paper, are, for the most part, negative.

Temporary Glycosuria.—Dr. Eichberg (*Cincinnati Lancet Clinic*) reports a case of temporary glycosuria, with remarks, from which we make the following abstract: The familiar term of diabetes has come to be surrounded by so many terrors, both to the lay mind and to that of a considerable portion of the profession, that it behooves us to exercise more care in its application, and to limit it to those cases in which the presence of sugar in the urine is a persistent phenomenon. It is difficult, extremely difficult, indeed, to tell exactly what diabetes is; and as long as there is such uncertainty as to its nature and pathology, our treatment must remain purely empirical. It has often been stated that diabetes, like jaundice, is a name, not for a distinctly diseased condition, but for a prominent symptom. The statement may be true, as far as it goes, but the similarity, to be complete, should be restricted to those cases of jaundice which owe their origin to causes other than those occasioning some obstruction to the outflow of bile: to what are known as cases of *hæmatogenous icterus*. In these, as in the case of diabetes, the unknown causal agency leads to the appearance in the blood and secretions of some abnormal product, about which we cannot say whether or no its appearance is due to deficient elimination or excessive production of a material whose presence in the blood in small quantities is strictly normal. A process of study similar to that which has been adopted in connection with Bright's disease, of sifting and of comparison, has been adopted with regard to the presence in the urine of the other important abnormal ingredient—namely, the sugar. As was to be fore-

seen, the results achieved have not been commensurate, either in a pathological or clinical way, with those obtained with reference to albuminuria,—firstly, because the number of cases in which glycosuria is a symptom is vastly smaller than those in which the urine contains albumin ; and, secondly, because pathological anatomy has failed to find for us any alteration in the tissues of the body to which we could certainly point as the cause of disease. What a decided help would it not be for us were we able, in conducting a post-mortem examination, to point to some one organ of the body, without being at all acquainted with the previous history of the case, and say : "This patient undoubtedly suffered from diabetes, for we have here the characteristic lesions of this disease ; lesions which, if found in any case, certainly point to an antecedent history of diabetes ; lesions which may really be regarded as the cause of all the symptoms"! We are not in position to make any such assertion, not even able to look forward to any realization of such a hope for the near future. Theories in plenty have been advanced to help us, but we absolutely lack the foundation of facts. Sugar may undoubtedly appear in the urine under the most varied conditions ; small quantities may escape observation by the ordinary tests, however carefully made, and there are doubtless many cases which go entirely unrecognized, but it is somewhat mortifying to have to confess that even in cases in which there is sugar present for many months and other symptoms all point to diabetes, we are treating we know not what ; and that when the patient finally leaves our hands, possibly so far improved that sugar is no longer discoverable, even then we cannot give him the assurance that he is positively relieved of his trouble, nor even promise him a short immunity.

For Rhus Poisoning.—℞ Borax, pulv., ʒij ; acid carbolic, ʒj ; morphia sulph., grs. x ; pulv. acacia, ʒiv ; water, q.s. ad., ʒviij. M. Agitate till solution is formed. Use with camel-hair brush. The carbolic acid and borax doubtless help to kill the poison, while with a few brushings the skin becomes coated with the gum, and the irritation and pruritus are allayed. —*M. & S. Reporter.*

Delirium Tremens.—Dr. J. T. Whittaker (*Cincinnati Lancet-Clinic*, June 5, 1885) says that signs of delirium tremens rarely appear until derangement of digestion is noticed, and the history of most cases shows a gastric catarrh which prevents the absorption of the remedies. Gastric catarrh produces delirium tremens by impairing nutrition. The secret of success in the treatment is to feed the patient properly. A man may drink and continue to drink, and show no delirium tremens; but as soon as vomiting begins, with the other pronounced symptoms of gastric catarrh, the mind begins to waver and the whole nervous system to flag. But not every drinker suffers delirium tremens. Alcohol is a food in the amount of one gramme to a kilo of weight (fifteen grains to two pounds) in 24 hours. The speaker frequently has had occasion to testify as to the testamentary capacity of individuals addicted to alcohol, and has familiarized himself with the subject. Eight grammes to a kilo will kill, and 100 grammes will produce disease and true delirium tremens in some cases, pretty much always, with the prelude of a gastric catarrh. So the tongue is coated, the breath foul, the bowels constipated, as a rule, throughout the disease. The secret of success is found when food is given in connection with the treatment of the cases. But the question is how to get food into the body. The gastric catarrh produces vomiting and thereby the food is rejected. If this be the case, it is highly important to inject the food into the bowel. Thus the patient is easily nourished by chopped beef and pancreas. To feed the exhausted nervous system is the best way to give it rest. He had seen many cases of delirium tremens, but never one which required the administration of chloroform. He would, however, not hesitate to resort to it if the necessity arose. As a rule, its use is unjustifiable. He would not hesitate to give bromide of potassium in ʒss doses if necessary to secure sleep. He does not consider it more dangerous than common salt. He gives drachm doses every four hours, largely diluted, of course, in hypochondriasis and hysteria. There is no better food by the mouth than milk. If this be rejected, then recourse must be had to rectal alimentation. The vomiting can be controlled by a dose or two

of the officinal morphia solution (U.S.P.) with a drop or two of dilute hydrocyanic acid. The quickest and best results are obtained by abstention from all anodynes, except, perhaps, the bromides. Steer away from anodynes, but secure sleep by feeding the nervous system. In convalescence, nothing is better than hydrochloric acid, five to seven drops, largely diluted, before meals.

On Surgical Operations during Pregnancy. By Dr. Theophilus Parvin, Prof. Obstetrics Jeff. Med. College, Philadelphia.—My resident tells me that this woman is in the seventh month of pregnancy and she has an ununited fracture that invites an operation for its cure, and the chances are that such an operation would be successful. Well, now, should we operate ? I would say no, not during the pregnancy. As a rule, I would advise you to defer all surgical operations that can be postponed until after pregnancy, and especially would I emphasize this rule with reference to all operations about the genital zone, and by this expression I do not mean merely the parts about the uterus and vagina, but I include also the mammary region. An operation for hemorrhoids during pregnancy would be very likely to cause abortion. The relation between the rectum and the genital organs is very close and intimate. So I would say that all operations of complaisance, operations that are not essential to the saving of life, should be postponed until after the labor. But let us suppose that instead of this simple fracture there was a sarcoma or a cancer of the arm ; well, then, under such urgent circumstances, I would not hesitate to operate during pregnancy. So, also, would I operate on cancer of the breast or a cancer of the cervix itself, if it were progressing. It will sometimes happen that there will be some disease of the sexual organs, and in this term I include the breasts, which is making rapid progress during pregnancy and where you can see that the only hope of saving life, or at least of prolonging existence, is to be found in operative measures, and, in such cases, I would not hesitate to operate. I would not hesitate when there was a cancer of the cervix, if the progress was rapid, for even if it did produce an abortion, this

would be the lesser of the two evils, and it would be very likely to occur anyhow before the termination of pregnancy, with the uterus in this condition. Even though the pregnancy did go on to full term, it is more than likely that the child could not be born naturally with this condition of affairs. To summarize, I would enunciate the general rule, that whenever the question of surgical operation presents itself in connection with a pregnant woman, if it be possible, without jeopardizing the safety of the patient, I would postpone it till after labor, but if the case be of such a nature as to threaten life, or if delay would prejudice the ultimate chances of a woman for recovery, then I would not hesitate to operate.—*Medical Age*, May, 1886.

Gonorrhœal Rheumatism.—Loeb is of opinion that gonorrhœa is only complicated by rheumatism in those cases in which the gonorrhœal process has attacked the hinder portions of the urethra, and in favor of this view he adduces the two facts, first, that the rheumatic symptoms never occur in the early stages of the gonorrhœa, and, secondly, that in the great majority of cases the rheumatism is never seen at all during the first attack, but only after subsequent attacks, when the posterior parts of the urethra are almost certain to be involved. As to the disputed point whether the rheumatism is to be considered as a disease *sui generis*, or as merely an ordinary rheumatic inflammation of the joints, predisposed by the gonorrhœal infection, he comes to the conclusion that *polyarthritis rheumatica* and gonorrhœal rheumatism are two perfectly distinct diseases, and he bases his conclusions on the following grounds:—1st, The difference in the relation of the fever to the local changes in the two diseases, in ordinary rheumatism the fever and the joint affection generally running hand in hand, whereas in gonorrhœal rheumatism the fever is always slight and in most cases is almost, if not entirely, absent. 2nd, The difference in duration of the two processes, the gonorrhœal rheumatism running a much longer course. 3rd, Gonorrhœal rheumatism is much less erratic in its character than ordinary rheumatism. 4th, The frequent association of gonorrhœal rheumatism with inflamma-

tion in the eyes, this inflammation, according to him, occurring sometimes without contagion, and being simply another local expression of the gonorrhœal infection. 5th, The less frequent implication of the heart in gonorrhœal rheumatism. 6th, The greater tendency to inflammation of the sheaths of tendons and synovial sacs generally in gonorrhœal rheumatism. 7th, And lastly, the difference in behavior of the two processes towards the salicylates. Loeb thus considers the gonorrhœal rheumatism as an infectious process, the seat of infection being the hinder parts of the urethra; and this view receives apparent support from the recent discovery of a specific organism in the gonorrhœal secretion, the gonococcus. Some doubt, however, still exists as to the specific character of this organism, and hence Loeb is more inclined to think that the cause of the infection will be found in non-specific organisms, examples of whose action in producing inflammation in joints we have, according to him, in the rheumatic affections of the joints which sometimes occur during the puerperium, also along with bronchiectasis, scarlet fever, and dysentery. As to the treatment, it is especially important as quickly as possible to cure the inflammation in the urethra, and especially of the hinder parts.—*D. Arch. f. Klin. Med.*, Dec. 1885; *Practitioner.*

A Peculiar Sputum in Hysteria.—Dr. E. Wagner has called attention to a peculiar sputum often observed by him in hysterical patients, the appearance of which might readily excite the suspicion that a phthisical affection is to be dealt with. But in fact it has been observed invariably as coming from subjects (always hysterical) who show no symptomatology by which tuberculosis of the lungs may be confirmed. The sputum is, of course, free from bacilli, is of a hemorrhagic nature, mostly red, but of a lighter red than ordinary bloody sputum, and not in any way resembling ordinary rusty-colored sputum. When examined in a glass it appears like a reddish or brownish-red pulp, in which numerous small gray particles cover the bottom. This sediment is so characteristic that it is easy to make the diagnosis with the naked eye. In one case

the sputum for several days, in color and consistence, resembled a raspberry jelly, so that he suspected the development of a sarcoma or carcinoma in the bronchial tubes, under which circumstances it is usual to see this character of sputum. Under the microscope, in the sputa described, may be seen considerable quantities of small red blood-corpuscles, and along with them, frequently, numerous white blood-corpuscles, pavement epithelium, and cocci. Alveolar epithelia from the lungs were not discovered. Sometimes mucous pockets are found embracing pus cells. In every case, upon failure to find signs of disease of the lung or larynx, the author believes he has a right to conclude that the bloody coloring proceeds from small bleeding vessels, that the colorless part of the sputum is a pathological secretion of the mucous membrane, and that probably it all originates in the buccal cavity. The writer reports four cases in which he had observed this sputum for a considerable length of time ; in one of which, however, bacilli at length appeared. In all cases an investigation for bacilli is of prime importance with a view to differential diagnosis.—*Deutsche Med. Zeitung ; American Practitioner.*

Experiments with the Virus of Rabies.—On March 6th a man in Brooklyn was bitten by a dog ; on May 14th he died, with all the symptoms of hydrophobia. Portions of the brain and cord were sent to Dr. Sternberg, at Johns Hopkins University, and this gentleman, on May 17th, inoculated three rabbits with the tissue by Pasteur's method. On June 2nd, one of the rabbits showed symptoms of the hydrophobia of rabbits described by Pasteur ; on June 5th the second rabbit showed similar symptoms. Some of the same brain and cord from the Brooklyn victim was taken by Dr. E. C. Spitzka, and rabbits were also inoculated by him. So far as we can learn from published reports, the rabbits showed symptoms like those of rabies, but Dr. Spitzka believes that such symptoms of themselves prove nothing, since he caused the same by inoculating rabbits with inert material and setting up meningitis.—*N. Y. Medical Record.*

CANADA

Medical and Surgical Journal.

MONTREAL, JULY, 1886.

CLIMACTERIC DIABETES IN WOMEN.

So many are apt to take a gloomy view of cases of well-marked diabetes, that we are thankful for anything that will tend to dispel such an (often) erroneous idea. That a severe diabetes may be temporary—may be recovered from either spontaneously or under suitable treatment—is quite well known, but no doubt there is still a good deal of uncertainty in the grouping of the cases, so that hesitation is often felt in rendering a sufficiently positive prognosis. The disease is certainly more malignant, less amenable to any treatment, in the young than in the old. Amongst people in advanced life diabetes is frequently met with, lasting through a series of years, without producing any marked symptoms, and perhaps only discovered when, from any reason, an examination of the urine has been made. Such persons may, after a variable time, completely recover. It is in the young and in young adults that the classical diabetes with bad prognosis is to be sought for. The factor of age is therefore always an important one. The connection of eczema of the genitals with diabetes has for many years been well recognized, so that the existence of such a cutaneous disorder is always accepted as an indication to look for sugar in the urine. The subject of diabetes occurring in women at the time of the climacteric has been recently treated of by M. Lecorché in the *Annales de Gynecologie*, and by Mr. Lawson Tait in the *Practitioner*. The observations of the latter are of considerable interest as regards the points above touched upon. He relates a series of cases of vulvar eczema occurring in

women at or about the time of the change of life. In all of these the general condition was but little impaired—most of them recovered completely, some spontaneously, others under treatment; the remainder having their eczema cured, whilst sugar persisted in varying amount. The points of value which he brings out are chiefly these :—That, as previously observed by others, " the menstrual life appears to create for women a " certain immunity with regard to this peculiar disease." That " there seems to be a special form of glycosuria in women at the " climacteric period, which runs a certain definite course extend- " ing over some years and having a natural termination in " recovery." That " it does not seem to be curable by drugs." That " the great majority of cases of eczema of the vulva at the " climacteric period are due to the presence of sugar in the urine." Sugar was found in every case of the kind which he had met with. Though the case will run its course, yet this may be shortened and much suffering prevented by treatment. Mr. Tait recommends the use of crude opium internally and an ointment of ten grains of sulphuret of potassium to the ounce. These observations seem to have separated a special group of cases of diabetes in which the prognosis is more favorable than in any other.

A CENTRAL EXAMINING BOARD.

There can be no doubt of the existence amongst the profession of this province of a sincere desire to promote a high standard of general excellence. Although, perhaps, the attainments of the average practitioner here may compare favorably with those of the same class in *e.g.* many of the neighboring states, yet it is distinctly felt, and fully admitted, that the time has come when a move towards reaching a higher plane may well be taken—is indeed demanded—if we are to hold our own. The only means by which such an advance can be made is by increasing the severity of the tests for admission to practice. At the present time all holders of diplomas from recognized universities in the province of Quebec are simply licensed therein, without further formality. It is quite possible that the

examination at some of these schools is fully equal to any which might be instituted by a provincial board, but it is not certain that all are equally stringent. The appointment of assessors to be present at the various school examinations and to report to the Board thereon, was effected at the time of the passing of the present Act as a compromise between those then favoring a central examining board and those who strongly opposed it. It is curious to observe that, after the lapse of a few years, the course of events has caused the latter to become the chief advocates of a central examining body, as now proposed to be constituted. The presence of the assessors has doubtless been useful in preventing slackness or abuses, but it cannot be considered that this alone is sufficient to oblige all the teaching bodies to keep up to such thoroughness of instruction as is really desirable. Thus it is that there is now a strong feeling in favor of the establishment of a Central Examining Board. We published last month the report of the Committee which has been engaged in considering this matter. Official notice is now given of a special meeting of the Provincial Medical Board, to be held on the 13th instant, when the subject will receive due consideration—final action to be taken upon it by the whole College at its triennial meeting the following day. It is hardly expected that any serious opposition will be offered to the scheme, although the details, as proposed by the Committee, may of course undergo considerable modification. The expense connected with a board of examiners will be very considerable here, owing to the necessity for a duplicate number of examiners in consequence of the two languages. The adjustment of the finances will, therefore, need to be carefully attended to, so as to avoid either burdening the College with debt or placing very heavy fees upon the students. It must be remembered that, if the Central Board scheme comes into operation, the position of Assessor will lapse, and the very considerable sums spent annually upon these officers will be available for other purposes. It is expected that by the saving effected in this way, and also by having a single annual meeting of the Board in place of the two meetings as heretofore, the amount required

for the examiners may be secured without placing too heavy a tax upon the candidates.

THE ELECTION OF GOVERNORS.

The Provincial Medical Board, as at present constituted, does not form a representative body in the true sense of the word. That is to say, the individual members have not been elected by the voters of a certain constituency to represent them in this assembly. On the contrary, the whole mass of the profession, brought together once in three years, determine upon the names of persons from each district to serve upon the Board for the next three years. The great—the preponderating—majority of members do not attend the meeting, but send proxies to their friends. Each proxy then counts for a vote for every district in the province, without, perhaps, the author of it having any cognizance whatever of even any single candidate's name. A few active men, working for a short time before the election, possess themselves of large bundles of proxies and practically control the election. In this way the most unpopular and unsuitable person may be returned for a given district without the possibility of the members resident in that district having the slightest power to prevent it. It is evident that this mode of election is not calculated to bring out the best and the most progressive, or most useful members, from whom to form the governing board. The practitioners of any locality are the persons best able to judge of the fitness and ability of the candidates in their district, and they should be entrusted with the important duty of sending a real representative to the Provincial Council. The outline of a scheme for carrying this into effect has been prepared, and was published last month. The procedure is mainly based upon that which has been followed for some years in Ontario, and meets with general approval. It is to be hoped that all the members of the College have examined its provisions, which, it seems to us, will be found to meet the necessities of the case in a very satisfactory manner.

CANADIAN MEDICAL ASSOCIATION.

The nineteenth annual meeting of this Association will take place in the city of Quebec, on Wednesday and Thursday, the 18th and 19th of August next, and the prospects are good for a very successful gathering. A number of prominent physicians and surgeons of leading medical centres of the United States have signified their intention of being present. We hope to see the profession well represented, both in attendance and literary contributions.

Owing to the absence of Dr. Stewart in Europe, Dr. James Bell of this city is acting as the general secretary, and will be pleased to hear from intending readers of papers as early as possible, so that a list may be printed. Arrangements are being made with the different railway and steamboat companies to enable those who wish to attend the meeting to do so at reduced rates. Further particulars will be given in our next issue.

The Provincial College.—We would direct attention to the advertisement calling a meeting of the Provincial Medical Board for the 13th inst, and one of the College of Physicians and Surgeons for the 14th inst. As very important matters will come before the members on both these days, it is hoped that a full attendance will be secured.

The Association of American Physicians held their first annual meeting in Washington, D.C., on the 17th and 18th June. The Association has been formed solely with the object of forwarding the interests of scientific medicine in America. The membership has been limited to 100, and is composed of well known representative physicians in various parts of the United States and Canada, and of those who are specially engaged in the medical work of the hospitals and in teaching the branches of medicine and pathology. A large proportion of all the members were present, this country being represented by Drs. J. E. Graham of Toronto and Geo. Wilkins and Geo. Ross of Montreal. Dr. R. P. Howard, who has taken part in

the preliminary meetings for organization, was, we regret, unable to attend owing to illness in his family. The proceedings opened with a short address from the chairman, Dr. Delafield of New York, upon the aims and object of the new association. This was followed by an exposition by Dr. S. Weir Mitchell of a series of recent observations upon knee-jerk and muscle-jerk in disease. Dr. Porcher of Charleston read a paper on Typhoid Fever, with special reference to treatment. Dr. Whittaker of Cincinnati one on Spasm of the Larynx in Rickets. A discussion was then had, introduced by Drs. Tyson of Philadelphia and W. H. Draper of New York, upon the question, Does the present state of knowledge justify a clinical and pathological correlation of Rheumatism, Gout, Diabetes and Chronic Bright's Disease? Dr. Bruen of Philadelphia read a paper on Some Cases of Diaphragmatic Pleurisy. On the second day, a very interesting demonstration was given by Dr. Councilman of Baltimore on Certain Elements found in the Blood of Malarial Fever. Dr. Lyman of Chicago read a paper on Certain Clinical facts connected with Tabes Dorsalis, and Dr. Fitz of Boston another on Diseases of the Appendix Cæci. This was a contribution of marked ability and research, and gave rise to an animated and practical discussion. The remaining papers were by Dr. Polk of New York on Peri-Uterine Inflammation, by Dr. Welch of Johns-Hopkins University on An Experimental Study of Glomerulo-Nephritis, and by Dr. Osler on the Bicuspid Condition of the Semilunar Valves. The meeting was considered a great success, and it is confidently believed that the Association will be the means of bringing out some of the best medical work of many of the best men in America. It will meet annually in Washington. For the coming year, Dr. S. Weir Mitchell will be President; Dr. Minot of Boston, 1st Vice-President; and Dr. R. P. Howard of Montreal, 2nd Vice-President.

Medical Items.

—Dr. Oliver Wendell Holmes is to receive the honorary degree of LL.D. from the University of Cambridge.

—Any village or town physician wishing a vacation to visit New York or London hospitals, and wanting a city graduate in medicine to take his practice, during July and August *only*, may do so by addressing "Doctor," Box 579, Kingston.

—The fifty-five million population of the United States have 89 regular medical colleges, with about 10,000 medical students; 8 of these medical colleges have each from 300 to 600 students; and 7 of these colleges have from 200 to 300 students.

—It is reported that his satanic majesty, while on a recent visit to this planet for a cargo of sulphur, was shown a sample of iodoform. He immediately countermanded the sulphur order, and substituted iodoform, saying, "Not in all my realms below does any perfume so please my senses." In other words, the odor of iodoform beats sheol.

A Peculiar Verdict.—A coroner's inquest was held a short time ago on the body of a Mrs. Monette, who, it appeared, had been suffering from heart disease, and this bringing on a fit of dependency, she had taken a dose of Paris green. The coroner's jury found that the woman had died of "heart disease accelerated by partaking of a dose of Paris green."

A very Broad Hint.—A physician in this city is said to have the following inscription on his bill-heads: "A patient's gratitude to his doctor is a part of his disease, and is most declared when the fever is highest, cools off during convalescence, and entirely disappears with the complete return of health. All bills due upon presentation. Office prescriptions and attendance strictly cash"—*Med. Record.*

—"Labor among Primitive Peoples," will be remembered as the interesting contribution to the history of midwifery by

Dr. Engelmann of St. Louis. It is a significant comment on the character of the questions now before the public mind to say that an order having been sent to one of our largest book-stores for the above volume, the entire available force of the establishment was engaged for half a day in an ineffectual search for it throughout the department of political economy. We are reminded in this same connection to mention the remark of a parent whose experience of offspring had been chiefly that of twins, that he considered the double births an improvement over the more general custom, as a "labor-saving institution."—*Boston Med. Journal.*

A New Method of Treating Thoracic Aneurism.—Under this title Dr. Richard Barwell describes a method which he has recently employed. It consists in puncturing the sac with a hollow ivory needle, and passing through this and into the sac about ten feet of fine steel wire. This latter is connected with a galvanic battery (positive pole), and a current of nine or ten milliampères is passed through it for an hour. In the case in which this method was tried, a considerable degree of firm coagulation was obtained, but the aneurism had a second sac, and the patient was nearly moribund before the operation. He died a week later.—*Med. Record.*

—Professor Huxley, in a certain debate on smoking among the members of the British Association, told the story of his struggles in a way which utterly put the anti-tobacconists to confusion. "For forty years of my life," said he, "tobacco had been a deadly poison to me. (Loud cheers from the anti-tobacconists.) In my youth, as a medical student, I tried to smoke. In vain! At every fresh attempt my insidious foe stretched me prostrate on the floor. (Repeated cheers.) I entered the navy. Again I tried to smoke, and again met with defeat. I hated tobacco. I could have almost lent my support to any institution that had for its object the putting of tobacco smokers to death. (Vociferous cheering.) A few years ago I was in Brittany with some friends; we went to an inn; they began to smoke and look very happy, and outside it was very wet and dismal. I thought

I would try a cigar. (Murmurs.) I did so. (Great expectations.) I smoked that cigar—it was delicious! (Groans.) From that moment I was a changed man, and now I feel that smoking in moderation is a comfortable and laudable practice, and is productive of good. (Dismay and confusion of the anti-tobacconists. Roars of laughter from the smokers.) There is no more harm in a pipe than there is in a cup of tea. You may poison yourself by drinking too much green tea, and kill yourself by eating too many beefsteaks. For my own part, I consider that tobacco, in moderation, is a sweetener and equalizer of the temper." (Total rout of the anti-tobacconists, and complete triumph of the smokers.)—*Med. & Surg. Reporter.*

—In the April number of the *Edinburgh Medical Journal*, J. Lindsay Porteous, M.D., F.R.C.S., M.R.C.P., Edin., says: "About eighteen months ago a friend of mine from America told me of the wonderful effects of a medicine, much used in the States, called *Bromidia*. According to the makers, it is composed of chloral hydrate, 15 gr.; potassium bromide, 15 gr.; extract of cannabis indica, $\frac{1}{8}$ gr.; and extract of hyoscyamus, $\frac{1}{8}$ gr. I obtained some, and have ordered it regularly for over a year; and have found it excellent in the pain of rheumatism, pneumonia and cancer, also in the sleeplessness of scarlatina and alcoholism. It has never failed me in procuring sleep, without the disagreeable dreams and after-effects of opium. The dose is ʒss to ʒj every hour till sleep is procured. I have also found it of much service in cases of tonsillitis, used as a gargle with glycerine and carbolic acid."

—Dr. Reginald G. Alexander, honorary senior physician to the Bradford Infirmary, England, says: "I have prescribed LACTOPEPTINE for many years, and carefully noted its admirable qualities. In some cases of atonic dyspepsia, especially in connection with anæmia, I have found most excellent results to follow from the use of this *digestion-compelling medicine*, if I may make use of such a term as expressive of its powerful action. As it restores the digestive function and improves the condition of the blood, it is a *curative agent*, and not merely palliative and temporary."

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The Montreal medical journal

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